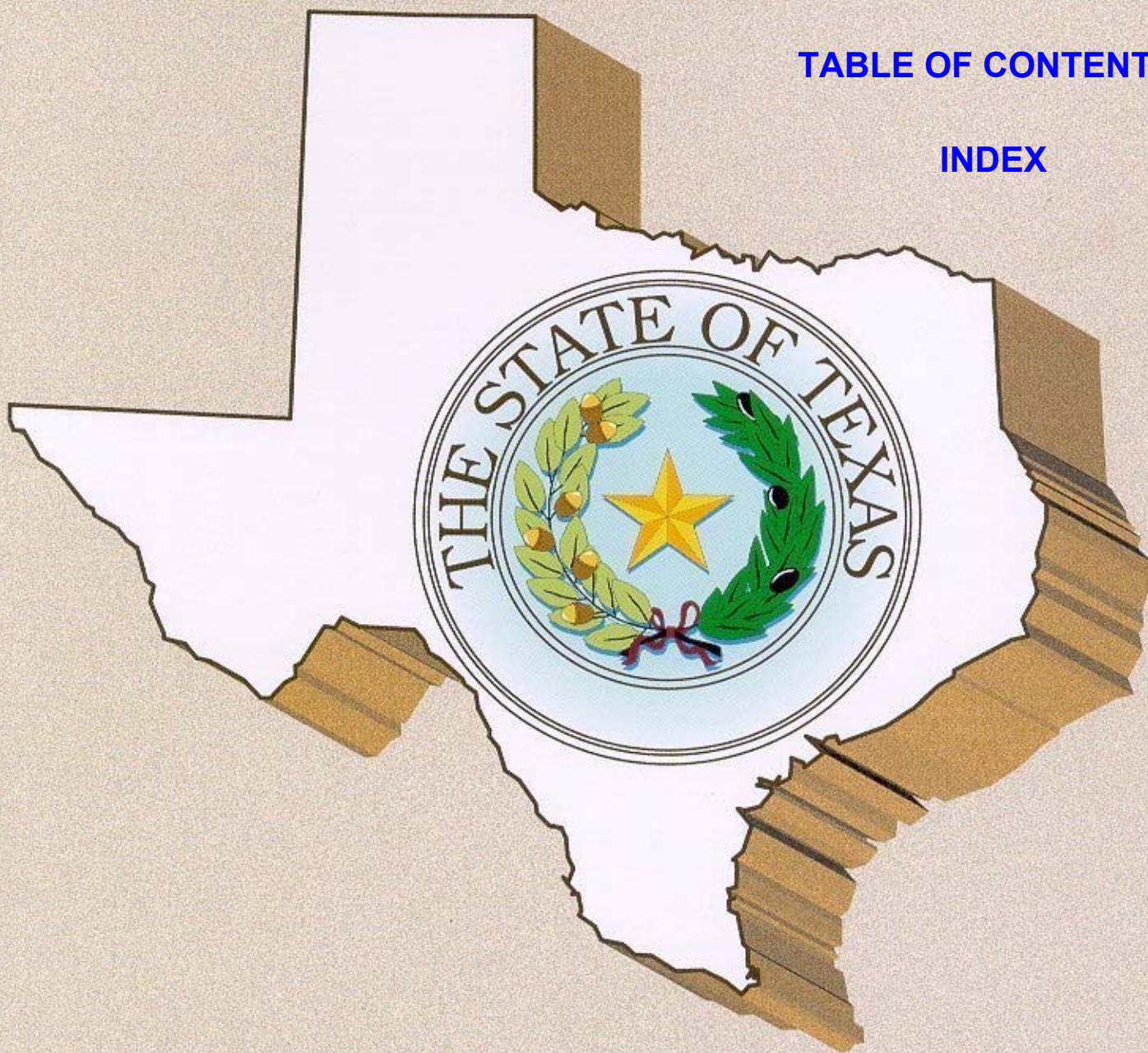


# TEXAS BREATH ALCOHOL TESTING PROGRAM

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## OPERATOR MANUAL



# TEXAS BREATH ALCOHOL TESTING PROGRAM OPERATOR MANUAL

The goal of the authors of this work is to provide a textbook for breath alcohol testing operator initial certification training. Beyond initial certification this manual should be utilized as a reference source as long as the operator remains in the Texas Breath Alcohol Testing Program and is actively engaged in driving while intoxicated enforcement.

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## **ANNEX - TEXAS BREATH ALCOHOL TESTING REGULATIONS**

### **ANNEX - LEGAL**

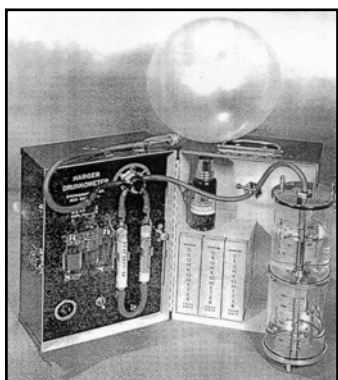
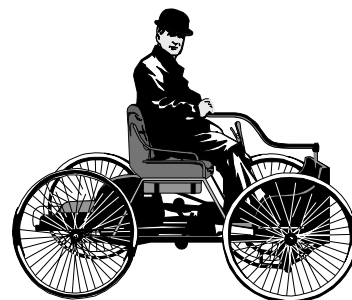
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# INTRODUCTION

Ethyl alcohol has been a factor in motor vehicle crashes since the appearance of the automobile. Studies as early as 1904 have shown that moderate and heavy drinkers are incapable of safely operating a motor vehicle.



Swedish researcher Erik Widmark worked extensively in the field of alcohol impaired drivers between 1914 and 1932. His work focused in two areas: the psychosensory and psychomotor tests to demonstrate physical impairment, and the use of chemical testing of body materials to measure alcohol level. His work earned him the distinction of being referred to by many as the father of modern alcohol testing. In 1937, another important scientist, Rolla Harger of Indiana University Medical School, developed the Drunkometer®, providing the first method of breath analysis that met the needs of law enforcement.

In 1936, the National Safety Council recognized the problem and established the Committee on Tests for Intoxication, now referred to as the Committee on Alcohol and Other Drugs. This committee formalized the use of tests for physical signs of impairment and the chemical tests for alcohol. The committee also encouraged and supported scientific research in all aspects of the problem of alcohol and transportation.



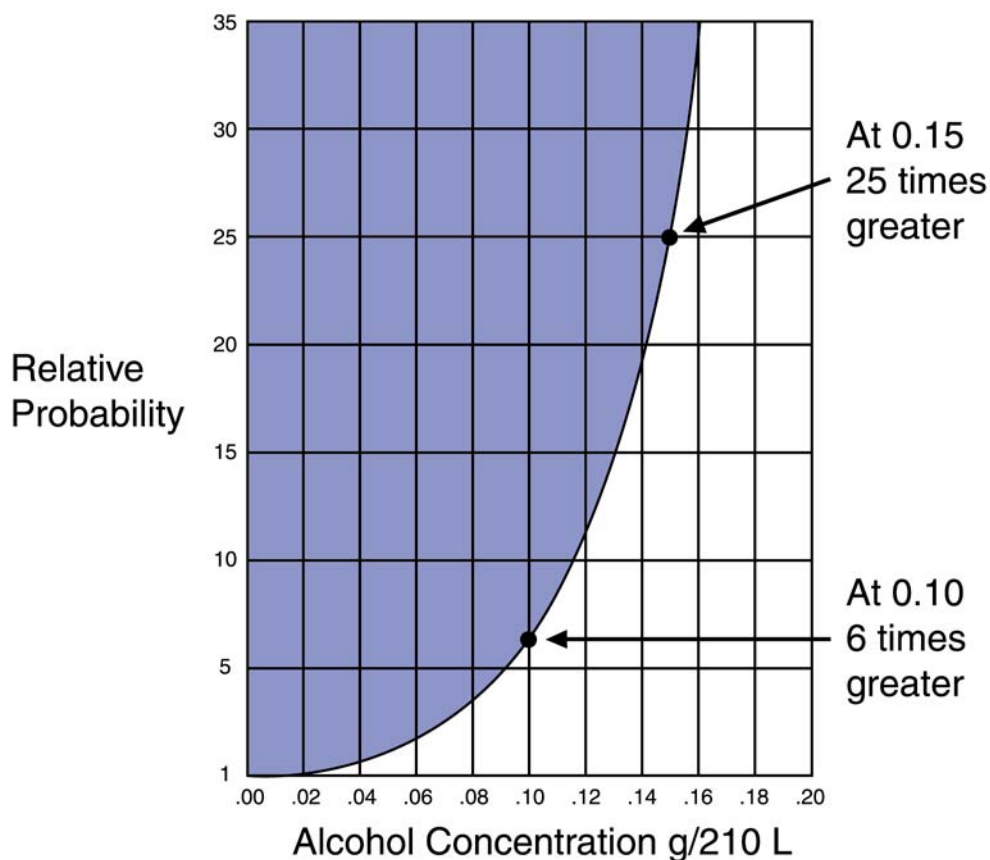
In 1939, Indiana became the first state to enact laws defining intoxication. This type of legislation soon became part of the Uniform Vehicle Code of the National Committee on Uniform Traffic Laws and Ordinances.

Numerous types of breath alcohol testing devices were developed, and instrumentation continued to develop as technology improved. Utilizing the new technology, Texas became involved in breath alcohol testing with pilot programs in the late 1940's and early 1950's.

In 1960, the National Safety Council recommended that an alcohol concentration above 0.10 be considered *prima facie* evidence of intoxication. As research continued, the committee recommended in 1971 an even lower presumptive level of 0.08.

Research clearly shows that a problem exists, that this problem is societal, and that a definite cause and effect relationship exists between alcohol in the body and the probability of a vehicle crash. Some of the facts that have emerged are:

- One out of every one hundred drivers in Texas has an alcohol concentration of 0.10 or more. On Saturday nights this statistic increases to one in ten.
- At alcohol concentrations as low as 0.02 g/210 L, alcohol affects driving ability and crash likelihood. The probability of causing a crash begins to increase significantly at 0.05 g/210 L and climbs rapidly after 0.08 g/210 L.
- For drivers with alcohol concentrations above 0.15 g/210 L on weekend nights, the likelihood of being killed in a single-vehicle crash is more than 380 times higher than it is for non-drinking drivers. The probability of a driver causing a vehicle crash increases from six times as great at an alcohol concentration of 0.10 g/210 L to twenty-five times as great at an alcohol concentration of 0.15 g/210 L.



### RELATIVE PROBABILITY OF CAUSING A CRASH

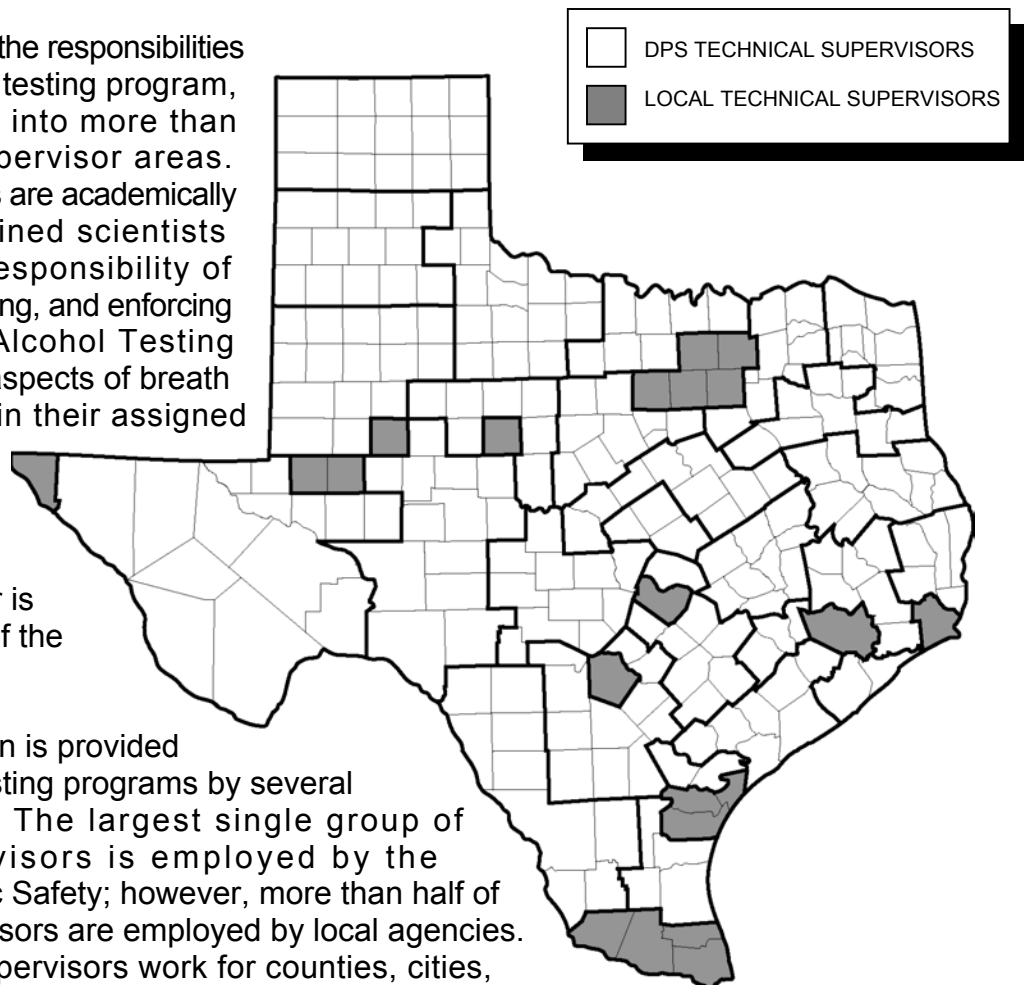
- Approximately 50% of all motor vehicle crashes in which death occurs are attributed to alcohol being a causative factor.
- In the United States, alcohol related crashes result in approximately 16,000 deaths, one million injuries, and \$45 billion in costs to society every year.

In 1969, the Texas Legislature passed the Implied Consent Law, which gave the authority to the Texas Department of Public Safety, through its Office of the Scientific Director, to develop rules and regulations for breath alcohol testing throughout the state. The Texas Breath Alcohol Testing Regulations establish the parameters within which breath alcohol testing is to be administered and regulated. These regulations include requirements for instruments, program supervision, testing methods, and operator certification. The Regulations are based upon statutes, case law, and recommendations from the Department of Transportation, the National Highway Traffic Safety Administration, and the National Safety Council Committee on Alcohol and Other Drugs. Strict adherence to these rules has made the Texas Breath Alcohol Testing Program one of the most successful and highly respected programs in the country.

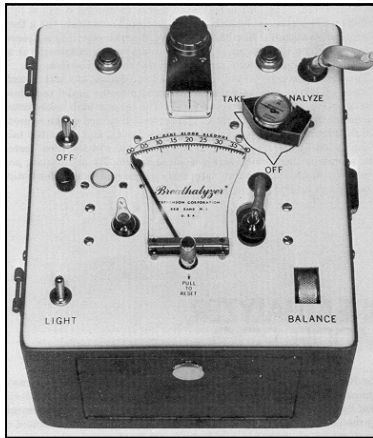
In order to administer the responsibilities of the breath alcohol testing program, the state is divided into more than forty Technical Supervisor areas. Technical Supervisors are academically and technically trained scientists charged with the responsibility of administering, regulating, and enforcing the Texas Breath Alcohol Testing Regulations and all aspects of breath alcohol testing within their assigned area. The relationship and communication between certified operators and their Technical Supervisor is vital to the success of the program.

Technical Supervision is provided for breath alcohol testing programs by several different sources. The largest single group of Technical Supervisors is employed by the Department of Public Safety; however, more than half of all Technical Supervisors are employed by local agencies. These Technical Supervisors work for counties, cities, and colleges, and several are private contractors providing services to counties or municipalities.

Technical Supervisors, regardless of their employer, supervise the breath alcohol testing activities of all the operators in their assigned area. This includes operators employed by the state (DPS and Texas Parks and Wildlife Department), counties (Sheriff's Offices and Constables), and cities (Police Departments). For instance, a DPS Trooper may be stationed in an urban area and work with breath alcohol testing equipment under the supervision of a county employed Technical Supervisor. On the other hand, a local police officer may work with breath alcohol testing equipment supervised by a DPS employed Technical Supervisor.



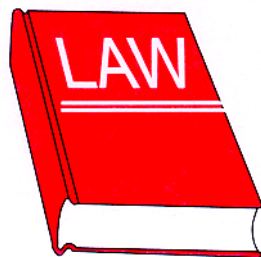




Texas began breath alcohol testing on a statewide level in 1968 using the Breathalyzer®. In 1980 the Intoxilyzer 4011AS-A® began use in Texas and in 1988 the Intoxilyzer 5000® was introduced. The Intoxilyzer 5000 is the standard evidentiary breath alcohol testing instrument for law enforcement and is also widely used in industry. The instrument utilizes infrared analysis, while the Breathalyzer uses wet chemical analysis. The biggest difference between the instruments as they have developed relates not to their accuracy and precision or to their method of analysis, but to their automation and ease of operation.



# THE METRIC SYSTEM



The metric system, a standard method of measuring length, volume, weight, and other values, originated in France in the late eighteenth century. Scientific measurements and most criminal laws citing measurement utilize the metric system. Chapter 49 of the Texas Penal Code defines alcohol concentration as the number of **grams** of alcohol per:

- (A) 210 **liters** of breath;
- (B) 100 **milliliters** of blood; or
- (C) 67 **milliliters** of urine.



55 gallons  $\cong$  210 L

Other examples of the metric system used in breath alcohol testing are:

- 0.080 g/210 L      Breath Alcohol Concentration (BrAC)
- 500 mL              volume of simulator solution
- 500 cc                volume of simulator solution
- 34°C                  approximate temperature of exhaled breath in degrees Celsius
- 34°C  $\pm$  0.2          operating temperature of a simulator
- 37°C                  body temperature
- 0.001 mm            approximate thickness of an alveolar membrane

The advantages of the metric system are:

- it is based on a decimal system (i.e. powers of ten),
- it simplifies calculations by using a fixed set of prefixes, and
- it is the standard of measurement used by most other nations of the world.

The main advantage of the metric system is the combination of uniform terminology with decimal organization. The prefixes associated with a decimal position can be attached to any base metric unit to create a new metric unit. The decimal prefix establishes the relationship between the newly created unit and the base unit.

There are many prefixes in the metric system. Listed below are some of the more common prefixes along with their decimal and exponential equivalents:

Prefix	Abbreviation	Decimal Equivalent	Exponential Equivalent
kilo	k	1000.0	$10^3$
base unit	-	1.0	$10^0$
deci	d	0.1	$10^{-1}$
centi	c	0.01	$10^{-2}$
milli	m	0.001	$10^{-3}$
micro	$\mu$	0.000001	$10^{-6}$

## MEASURE OF LENGTH

The basic metric unit of length is the meter (m). The meter is analogous to the English yard. A meter is equal to slightly more than a yard (about 10% longer).

METER

YARD

One meter is equal to 1.09 yards or 39.36 inches.

A larger metric unit is the kilometer (km), which is analogous to the English mile. One kilometer is equal to 0.62 miles. In countries where the metric system is the national standard, posted speed limits are in km per hour. For example, the most common speed limit in Mexico is 100, but that is 100 kilometers per hour or 62 miles per hour.

Other length units include the:

- Centimeter (cm) - The centimeter is analogous to the English inch. One inch is equal to 2.54 cm.
- Millimeter (mm) - One millimeter is equal to about the thickness of a dime.
- Micrometer ( $\mu\text{m}$ ) - One micrometer, also called a micron, is about the thickness of a strand in a spider's web or one hundred times finer than a human hair.



## MEASURE OF VOLUME



The basic metric unit of volume is the liter (L). The liter is analogous to the English quart. One liter is about the same as 1.06 quarts. If a liter were divided into one thousand equal parts, each part would be one milliliter (mL). The milliliter is analogous to the English fluid ounce. One fluid ounce is equal to about 30 mL.

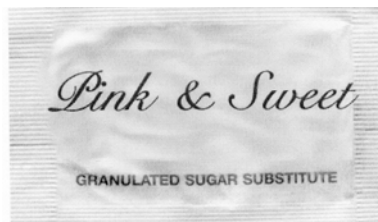
Another metric unit is the cubic centimeter (cc or  $\text{cm}^3$ ), which is equal to a milliliter. A cc may look like a length unit since it has the word "centimeter" in it. However, it also has the word "cubic" which always indicates a volume unit.

A cubic centimeter is a cube measuring 1 cm on each edge. The volume of such a cube would be 1 cm X 1 cm X 1 cm or  $1 \text{ cm}^3$ .



## MEASURE OF MASS

The basic metric unit of mass is the gram (g). The gram is analogous to the English ounce. About 30 grams equal one ounce. Examples of common objects that weigh a gram are a package of artificial sweetener and a small paper clip.



NOTE: 1 mL or 1 cc of water at 4° Celsius weighs 1 gram.

A larger mass unit analogous to the English pound is the kilogram (kg). The kilogram is the same as 1000 grams and represents 2.2 pounds in mass. Other metric mass units include the:

- centigram (cg)
- milligram (mg)
- microgram ( $\mu\text{g}$ )

## MEASURE OF TEMPERATURE

Fahrenheit ( $^{\circ}\text{F}$ ) is probably the most familiar temperature scale. On this scale, the freezing and boiling points of water are 180 degrees apart. Water freezes at  $32^{\circ}\text{F}$  and boils at  $212^{\circ}\text{F}$ .

Scientific measurements of temperature are generally made by using the Celsius ( $^{\circ}\text{C}$ ) scale. On this scale, the freezing and boiling points of water are 100 degrees apart. Water freezes at  $0^{\circ}\text{C}$  and boils at  $100^{\circ}\text{C}$ . Since there are 100 degrees between the freezing and boiling points of water, each degree Celsius is 1.8 times as large as each degree Fahrenheit.

FAHRENHEIT ( $^{\circ}\text{F}$ )			CELSIUS ( $^{\circ}\text{C}$ )	
212.0°		<b>Water Boils</b>		100°
98.6°		Body Temperature		37.0°
93.6°		Maximum Reference Temp.		34.2°
93.2°		<b>Breath Leaves Mouth</b>		34.0°
92.8°		Minimum Reference Temp.		33.8°
70.0°		Room Temperature		21.1°
32.0°		<b>Water Freezes</b>		0.0°
0.0°				-17.7°

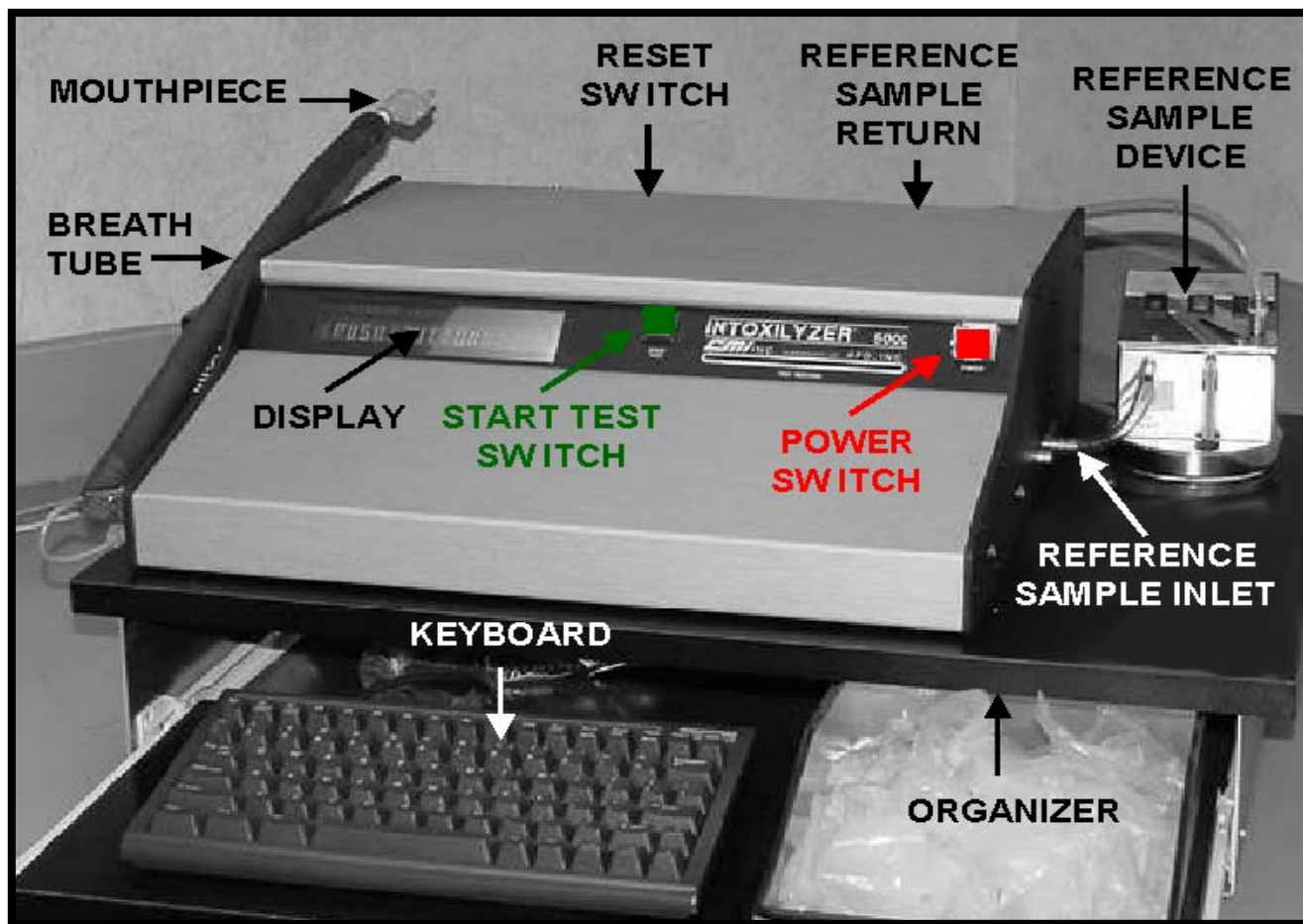
## THE RELATIONSHIP BETWEEN TEMPERATURE SCALES



# LABORATORY

This chapter describes the operation of the Intoxilyzer 5000 and its associated equipment. Required paperwork and names of various equipment parts are also covered. Displayed messages are in **DISPLAY FONT** and CAPITALS are used for switches, keys, or keyboard entries. Instrument and reference sample device (simulator) part names are in **bold typeface**. Printed messages are in UNDERLINED CAPITALS.

## INTOXILYZER 5000



## INTOXILYZER 5000 PART NAMES

The red POWER switch and the green START TEST switch are used to operate the Intoxilyzer 5000. Pushing the POWER switch turns the instrument on or off. **NOT READY** appears on the **display** until the instrument has reached operating temperature. Pushing the START TEST switch once begins a test sequence. Pushing the START TEST switch a second time invalidates the test and the Intoxilyzer will display **INVALID TEST** and print INVALID TEST on the Test Record.

The **display** provides information and instructions for the operator. A scrolling message between tests includes the date and time. After the START TEST switch is pushed, instructions

and sequence descriptions are displayed at the proper times. A descriptive message is displayed whenever a test is invalidated.

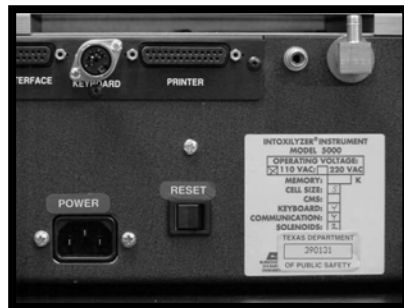
An Intoxilyzer Test Record will be printed at the end of each test. The instrument automatically assigns each test a unique number, which is printed on the Test Record.

The **breath tube** is the heated, reinforced plastic tube on the left side of the instrument. It is heated to prevent condensation of water vapor. All breath samples and the room air used in the air blank sequences are directed to the **sample chamber** through this tube.

The **reference sample inlet** is located on the right side of the instrument. The **reference sample return** is located on the right rear of the instrument. These two ports are used to connect the **reference sample device (simulator)** to the instrument.

The RESET switch is located on the back panel of the instrument. When this rocker switch is activated **NOT READY** will appear on the **display**. The instrument should then conduct a circuitry check and return to the scrolling mode.

**RESET  
Switch for  
Intoxilyzer  
5000-68**



**RESET  
Switch for  
Intoxilyzer  
5000-68 EN**



The **keyboard** is used for data entry.

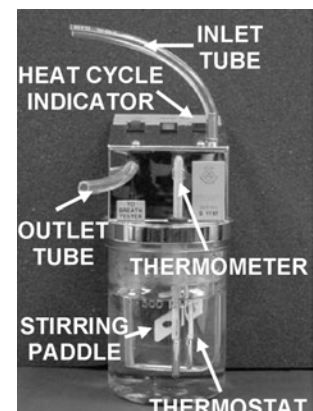
Three distinct tones are sounded to indicate different information:

1. A short tone sounds with the completion of each step/operation.
2. A continuous tone sounds while the subject is delivering a sample with sufficient pressure.
3. A low-high tone sounds intermittently for several seconds when an improper condition exists.

The **organizer** supports the Intoxilyzer 5000 and the **reference sample device (simulator)**.

## REFERENCE SAMPLE DEVICE (SIMULATOR) PART NAMES

The **reference sample device**, also known as the **simulator**, provides an alcohol/water vapor sample, which serves to verify the accuracy and calibration of the breath alcohol testing instrument. The device is designed to deliver a sample with a known concentration of ethyl alcohol. The operating temperature is  $34^{\circ}\text{C} \pm 0.2$  ( $33.8$  to  $34.2^{\circ}\text{C}$ ), or approximately  $93.2^{\circ}\text{F}$ . The operator may verify the correct temperature by observing the **thermometer** on the front of the device.



The **stirring paddle** rotates to maintain an even temperature throughout the solution. The operation of the **stirring paddle** indicates that power is getting to the **reference sample device**.

The **heat cycle indicator** is on when the heating element is on. This light will cycle on and off while the proper temperature is being maintained.

The **inlet tube** and **outlet tube** channel air through the **reference sample device** and to the Intoxilyzer 5000 for analysis.

## INSTRUMENT OPERATION

**STANDBY MODE (INTOXILYZER 5000-68 EN ONLY)** The Intoxilyzer 5000-68 EN is equipped with a *standby mode* that is similar to the power saver mode of some personal computers. If the instrument is on but has not been used for a period of time it will go into the *standby mode*. The POWER switch will remain in the depressed position, a red LED light located just below the POWER switch will be illuminated, and the display will be blank. To bring the instrument out of the *standby mode*, press the START TEST switch. The instrument will display **WARM UP PERIOD** and should be ready for use in about 5 - 6 minutes. The Intoxilyzer 5000-68 does not have a *standby mode*.

Press the green START TEST switch once. The instrument will automatically conduct a series of diagnostic checks called the *circuitry check*.

## CIRCUITRY CHECK

The following phrases will be displayed:

**PROM CHECK** (checks internal software)  
**RAM CHECK** (checks internal memory)  
**TEMP CHECK** (checks sample chamber temperature)  
**PROCESSOR CHECK** (checks microprocessor)  
**PRINTER CHECK** (checks printer response)  
**RTC CHECK** (checks clock)  
**INTERNAL 1** (checks 0.100 internal standard)  
**INTERNAL 2** (checks 0.200 internal standard)  
**INTERNAL 3** (checks 0.300 internal standard)  
**INTERNAL 4** (checks 0.400 internal standard)  
**INTERNAL 5** (checks 0.500 internal standard)

At the end of this diagnostic sequence the **display** should read **CIRCUITRY OK**. If the instrument detects an incorrect parameter during these checks the testing sequence will be terminated.

## DATA ENTRY

After a successful circuitry check a series of prompts will be displayed. After each entry press the ENTER key to accept the entry. Never use a comma or period. Do not enter extra spaces.

**TYPE OF TEST - ENTER 1 FOR DWI, 2 FOR BWI, 3 FOR DUI MINOR, 4 FOR PRACTICE TEST, 5 FOR LAB EXAM, 6 FOR OTHER**

Enter the number (1-6) that corresponds most closely to the type of test to be conducted. Type of test entries 1, 2, 3, and 6 are used for statistical purposes only. The Test Record will not reflect the selection of these entries. Type of test **6 FOR OTHER** should not be used for persons arrested for public intoxication. Persons arrested for public intoxication should not be tested on the Intoxilyzer 5000.

When 4 is entered for a practice test the instrument will automatically enter the next four queries. PRACTICE TEST will be entered for the **SUB LAST NAME**, a space will be entered for the **SUB FIRST NAME**, a space will be entered for the **SUB MIDDLE INIT**, and the current date will be entered for the **DATE OF BIRTH**. The next query displayed will be **OPER LAST NAME**. The remaining queries will be displayed in their normal order. When the data entries are reviewed, all of the entries may be changed; however, when 4 is entered for a practice test, the **SUB LAST NAME**, automatically entered as PRACTICE TEST, cannot be changed.

When 5 is entered for a Lab Exam, the words LAB EXAM will be printed on the Test Record above the line provided for the operator's signature.

**SUB LAST NAME** Enter the subject's last name. Enter JR, III (use letters, not numbers), etc., as part of the subject's last name (example: SMITH JR or WILSON III). Hyphenated last names are permitted (example: SMITH-JONES). Omit apostrophes in names, as this is an inactive key (O'Grady enters as OGRADY).

**SUB FIRST NAME** Enter subject's first name.

**SUB MIDDLE INIT** Enter subject's middle initial. If no middle initial, press SPACE.

**DATE OF BIRTH** Enter the subject's date of birth MMDDYY. If the D.O.B. is unknown, press ENTER. The instrument will display the current date. Press ENTER again to accept the entry.

**OPER LAST NAME** Enter the operator's last name. Enter JR or III (use letters, not numbers) as part of the operator's last name.

**OPER FIRST INIT** Enter operator's first initial.

**OPER MIDDLE INIT** Enter operator's middle initial. If no middle initial, press SPACE.

**OPER CERT NO** Enter operator's certificate number.

**OPER AGENCY** Enter the operator's agency. Use approved abbreviations.

**ARREST OFFICER** Enter the arresting officer's last name, SPACE, first initial as one entry (example: William D. Smith Jr. is entered SMITH JR W). Enter SOLUTION CHANGE when performing a practice test in conjunction with a solution change.



**ARREST AGENCY** Enter the arresting officer's agency using approved abbreviations.

<u>AGENCY</u>	<u>ABBREVIATION</u>	<u>ENTRY</u>
Texas Dept. of Public Safety	DPS (Duty Station)	DPS EL PASO
Texas Parks and Wildlife Dept.	TPWD (City)	TPWD TYLER
Texas Alcoholic Beverage Comm.	TABC (City)	TABC DALLAS
(City) Police Department	(City) PD	LUBBOCK PD
(City) Dept. of Public Safety	(City) DPS	MINERAL WELLS DPS
(City) Marshal's Office	(City) MO	LAKEPORT MO
(County) Sheriff's Office	(County) SO	TRAVIS SO
(County) Constable Precinct #	(County) CONST #	HILL CONST 2
North	N	N ZULCH PD
South	S	S PLAINS PD
East	E	E BERNARD PD
West	W	W ORANGE PD
DO NOT USE PERIODS OR COMMAS WHEN MAKING DATA ENTRIES. The Technical Supervisor may authorize additional abbreviations as needed.		

### APPROVED ABBREVIATIONS

**SUB SEX M/F?** Enter subject's gender abbreviation.

**REVIEW DATA? Y/N** This step allows the operator to review and change any entry. Enter Y, then ENTER to review the data. Press ENTER to step through the information. To correct an entry use BACKSPACE to erase, then enter the correct information followed by ENTER. Always check the data at least once to confirm the entries. Once all entries have been verified, enter N and press ENTER to continue.

### CONDUCTING AN ANALYSIS – SAMPLING SEQUENCE

**AIR BLANK .000** The instrument is purging the sample chamber with room air. If the instrument detects a contaminant in the room air, it will invalidate the test, display **AMBIENT FAILED**, and print CHECK AMBIENT CONDITIONS on the Test Record.

**> > >....** The instrument is establishing a zero reference point.

### PLEASE BLOW INTO MOUTHPIECE UNTIL TONE STOPS

**PLEASE BLOW/R** This message will flash until a breath sample is initiated or for a maximum of three minutes. If the subject refuses to provide a sample the operator should enter R followed by ENTER to indicate a refusal. The instrument will invalidate the test, display **REFUSED**, and print SUBJECT REFUSED TO CONTINUE on the Test Record. This option is only available when the **/R** is present.

**PLEASE BLOW** When a breath sample is initiated with sufficient pressure, a continuous tone will sound, the **/R** at the end of **PLEASE BLOW** will disappear, and the **display** will be

constant, not flashing. If the subject starts but does not continue to deliver a sample with sufficient pressure or the subject does not blow long enough to provide a sufficient sample, **PLEASE BLOW** will continue to flash and a short tone will sound every few seconds. The subject has three minutes to deliver an adequate breath sample before the instrument invalidates the test. If the subject starts to provide a sample, then refuses to continue, **/R** is no longer available. The operator should wait for the three minutes to expire. The instrument will invalidate the test, display **DEFICIENT SAMPLE**, and print DEFICIENT SAMPLE on the Test Record.

**SAMPLE ACCEPTED** Once an acceptable sample has been delivered, the instrument will momentarily display **SAMPLE ACCEPTED**.

**AIR BLANK .000** The instrument is purging the sample chamber with room air.

**> > >....** The instrument is establishing a zero reference point.

**REFERENCE .XXX** The instrument will automatically analyze vapor from the **reference sample device (simulator)**. The result of the reference sample analysis must be within  $\pm 0.010$  g/210 L of the predicted value. The predicted value is entered by the Technical Supervisor and will be printed on each Test Record. If the reference sample result is not within tolerance, the instrument will automatically invalidate the test, display **OUT OF TOLERANCE**, and print \*REFERENCE CHECK OUT OF TOLERANCE on the Test Record. The instrument will then scroll the reference result on the **display** repeatedly until the START TEST switch is pressed.

**AIR BLANK .000** The instrument is purging the sample chamber with room air.

**PLEASE WAIT** At this point the instrument will pause to allow at least two minutes between breath samples. This is followed by another purge cycle.

**> > >....** The instrument is establishing a zero reference point.

**PLEASE BLOW INTO MOUTHPIECE UNTIL TONE STOPS**

**PLEASE BLOW/R** A second sample is delivered in the same manner as the first sample.

**SAMPLE ACCEPTED** Once an acceptable sample has been delivered, the instrument will momentarily display **SAMPLE ACCEPTED**.

**AIR BLANK .000** The instrument is purging the sample chamber with room air.

**TEST COMPLETE** The instrument will verify that the results of the breath samples agree within 0.020 g/210 L. If the breath samples agree within 0.020 g/210 L the instrument will flash the subject results on the **display** three times and print the test information on the Test Record. If the results do not agree, the instrument will invalidate the test, display **NO .020 AGREEMENT**, flash the subject results on the **display** three times, and print NO .020 SUBJECT TEST AGREEMENT on the Test Record. The operator must sign the Test Record.

## DETERMINING A PROPERLY COMPLETED LABORATORY TEST RECORD

In order for a laboratory analysis to be considered properly completed, the Test Record must have all of the following:

1. No invalid messages printed on the Test Record.
2. All results clearly printed.
3. All air blank results must be 0.000.
4. No incorrect entries.
5. The signature of the operator.

## REUSING PREVIOUSLY ENTERED DATA

For the test immediately following an invalid test, except for REFUSED and INTERFERENT tests, the instrument will allow the operator to reuse the previously entered data. This option will be available for up to 20 minutes after the invalid test. When the operator begins the next test, the first query will be **TYPE OF TEST**, followed by **SUB LAST NAME** as usual; however, if the last name matches the previous last name exactly, the next query will be **REUSE DATA? Y/N**.

If Y for yes is entered, the next query will be **REVIEW DATA? Y/N**. The operator may review the previously entered data by entering Y; however, if the data entry from the previous invalid test appears correct, the operator may enter N for no and the sampling sequence will begin. If the operator enters N at the **REUSE DATA? Y/N** query, **SUB FIRST NAME** will be the next query and data entry will proceed as usual.

When the data entered for the subject's last name, first name, middle initial, and date of birth are identical to the previous test, TEST 002 will be printed on the second Test Record. If the subject data entered for the next test is identical to the previous test, TEST 003 will be printed on the third Test Record and so on and so on. This type of test numbering will occur if the subsequent test data is entered either automatically by reusing the previously entered data or manually by reentering the data. If an operator conducts a second test on a subject after a refusal or interferent test, these tests will be numbered as well. **A subject whose test is invalidated due to an interferent should not be retested on an Intoxilyzer. It is suggested that a blood test be obtained.**

## REPRINTING A TEST RECORD

To reprint a Test Record enter Alt P while the **display** is scrolling. The Intoxilyzer 5000-68 will immediately reprint the previous Test Record. The Intoxilyzer 5000-68 EN will display the query **TEST RECORD NO=**. The operator may enter the desired Test Record number of the test to be reprinted or press ENTER and the last Test Record number will be automatically displayed. The operator may edit the displayed number. When ENTER is pressed again the Intoxilyzer 5000-68 EN will print the selected Test Record.

## **INTOXILYZER TEST RECORD DISTRIBUTION**

The laboratory instructor will give instructions for the distribution of Test Records in the laboratory. The operator should sign all Test Records used to conduct a laboratory analysis whether complete, incomplete, valid, or invalid. Distribution of Test Records in the field will vary from the laboratory and is outlined below as well as in the Evidential Breath Analyses chapter.

The Intoxilyzer prints out Test Records on full sheets of paper using a standard personal computer style printer. All printed Test Records should bear the signature of the operator and be distributed according to established procedures. Leave one Test Record at the breath testing site for the Technical Supervisor for each Test Record printed by the instrument. This includes complete, incomplete, valid, and invalid tests. Attach one Test Record to the paperwork presented to the criminal prosecutor for each Test Record printed by the instrument. This also includes complete, incomplete, valid, or invalid tests. Photocopies of the Test Record may be made if additional copies are needed. The Technical Supervisor may provide you with specific routing instructions for your particular duty station.

The operator should sign and distribute all Test Records whether complete, incomplete, valid, or invalid. Test Records are used as evidence in criminal, civil, and administrative proceedings; therefore, they should be handled with care in order to preserve their integrity.



## PRACTICE TEST

Enter 4 for a practice test. The instrument will automatically enter the next four queries. PRACTICE TEST will be entered for the **SUB LAST NAME**, a space will be entered for the **SUB FIRST NAME**, a space will be entered for the **SUB MIDDLE INIT**, and the current date will be entered for the **DATE OF BIRTH**. The next query displayed will be **OPER LAST NAME**. The remaining queries will be displayed in their normal order. When the data entries are reviewed, all of the entries may be changed; however, when 4 is entered for a practice test, the **SUB LAST NAME**, automatically entered as PRACTICE TEST, cannot be changed. **ARREST OFFICER** is entered as SPACE followed by ENTER, unless the term SOLUTION CHANGE is entered following a reference solution change. **ARREST AGENCY** is entered as SPACE followed by ENTER. The operator provides the breath specimen during the **PLEASE BLOW** sequence steps. Use the operator's gender abbreviation for practice tests when prompted.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00001  
SUBJECT:PRACTICE TEST, ,  
SUBJECT DATE OF BIRTH:04/09/03  
OPERATOR:WALKER JR,H,R  
OPERATOR CERTIFICATE #:01000  
OPR AGENCY:DPS DALLAS  
ARST OFFICER:  
ARST AGENCY :  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

ANALYSIS	ALC CONC	TIME
AIR BLANK	0.000	10:42 CDT
SUBJECT TEST	0.000	10:42 CDT
AIR BLANK	0.000	10:42 CDT
REFERENCE	0.080	10:42 CDT
AIR BLANK	0.000	10:43 CDT
SUBJECT TEST	0.000	10:44 CDT
AIR BLANK	0.000	10:44 CDT

*H.R. Walker, Jr.*

OPERATOR

PRACTICE TEST

## CHANGING THE REFERENCE SOLUTION

The reference solution is normally changed by the Technical Supervisor. However, the following procedure should be followed if the Technical Supervisor requests that the operator change the solution:

1. Ascertain that a fresh reference sample solution is available.
2. Unplug the **reference sample device (simulator)**.
3. Notice how the tubing between the **reference sample device** and the Intoxilyzer 5000 is connected.
4. Disconnect the tubing.
5. Unscrew the top.
6. Pour out the old solution.
7. Pour a new solution into the glass jar.
8. Replace top on jar.
9. Check seal by blowing into the **inlet tube** and blocking the **outlet tube**.
10. Plug into an electric outlet. Check to see if the **stirring paddle** is turning.
11. Connect the **inlet** and **outlet tubes** to the Intoxilyzer 5000 as noted in step 3. If you are unsure, call your Technical Supervisor now!
12. Wait for the solution temperature to reach  $34^{\circ}\text{C} \pm 0.2$  ( $33.8^{\circ}\text{C}$  to  $34.2^{\circ}\text{C}$ ).
13. Run a practice test on the new solution. Enter SOLUTION CHANGE at the **ARREST OFFICER** prompt.
14. Save the reference solution bottle for the Technical Supervisor.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00002  
SUBJECT:PRACTICE TEST, ,  
SUBJECT DATE OF BIRTH:04/09/03  
OPERATOR:ANDERSON,S,L  
OPERATOR CERTIFICATE #:01001  
OPR AGENCY:ORANGE PD  
ARST OFFICER:SOLUTION CHANGE  
ARST AGENCY :  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

ANALYSIS	ALC CONC	TIME
AIR BLANK	0.000	15:14 CDT
SUBJECT TEST	0.000	15:14 CDT
AIR BLANK	0.000	15:14 CDT
REFERENCE	0.080	15:15 CDT
AIR BLANK	0.000	15:15 CDT
SUBJECT TEST	0.000	15:16 CDT
AIR BLANK	0.000	15:16 CDT

*Shawn Anderson*

---

OPERATOR

SOLUTION CHANGE

## SIMULATED SUBJECT TEST

A simulated subject test is a combination subject and practice test used for instructional and testing purposes. Fictional information is provided for the subject and arresting officer, which the operator enters like a subject test, and the breath samples are provided by the operator like a practice test.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00003  
SUBJECT:PEREZ,ALLISON,M  
SUBJECT DATE OF BIRTH:02/24/72  
OPERATOR:LILLY,R,C  
OPERATOR CERTIFICATE #:01002  
OPR AGENCY:TOM GREEN SO  
ARST OFFICER:LAMB D  
ARST AGENCY :UNIVERSITY PD  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

ANALYSIS	ALC CONC	TIME
AIR BLANK	0.000	11:01 CDT
SUBJECT TEST	0.000	11:01 CDT
AIR BLANK	0.000	11:01 CDT
REFERENCE	0.081	11:01 CDT
AIR BLANK	0.000	11:02 CDT
SUBJECT TEST	0.000	11:03 CDT
AIR BLANK	0.000	11:03 CDT

*R.C. Lilly*

---

OPERATOR

SIMULATED SUBJECT TEST

## ANNUAL RENEWAL PRACTICAL EXAMINATION

During annual renewal each operator will be required to run several practical analyses on an Intoxilyzer 5000. To conduct an annual renewal practical examination test enter 5 for Lab Exam at the **TYPE OF TEST** query. The words LAB EXAM will be printed on the Test Record above the line provided for the operator's signature.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA: 099  
04/09/2003 UNIVERSITY PD  
ZZ00005  
SUBJECT:HARGER,ROBERT,M  
SUBJECT DATE OF BIRTH:01/02/39  
OPERATOR:WILLIAMS,W,J  
OPERATOR CERTIFICATE #:01003  
OPR AGENCY:CORPUS CHRISTI PD  
ARST OFFICER:ANDERSON E  
ARST AGENCY :DPS BORGER  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

ANALYSIS	ALC CONC	TIME
AIR BLANK	0.000	12:41 CDT
SUBJECT TEST	0.000	12:41 CDT
AIR BLANK	0.000	12:42 CDT
REFERENCE	0.079	12:42 CDT
AIR BLANK	0.000	12:43 CDT
SUBJECT TEST	0.000	12:43 CDT
AIR BLANK	0.000	12:44 CDT

LAB EXAM

*Walter Williams*

OPERATOR

LAB EXAM

## LABORATORY ANALYSES

During this class you will be performing various types of analyses that are performed by certified operators on the Intoxilyzer 5000. These analyses are simulated subject tests, practice tests, and practice tests with a solution change. The type of test, subject name, DOB, arresting officer, and arresting agency are provided for each of the laboratory analyses so that you will become familiar with the appropriate keyboard entries.

Use the test information supplied below to conduct the analyses during the laboratory sessions. Speed in conducting these analyses is not necessary. The objective of the laboratory sessions is to become familiar with the proper keyboard entries and techniques necessary to perform proper breath tests. See pages 16 through 20 for examples of each type of analysis to be conducted. Enter your results on the Laboratory Worksheet. See page 26 for an example of a properly completed Laboratory Worksheet.

1

### PRACTICE TEST

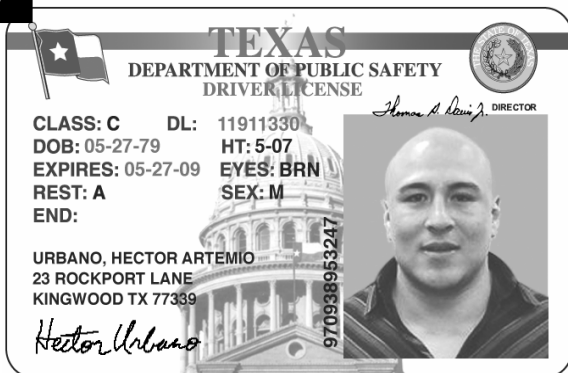
ARRESTING OFFICER:  
ARRESTING AGENCY:  
**PRACTICE TEST**

2



ARRESTING OFFICER: Joe Bob Moore III  
ARRESTING AGENCY: Texas Dept. of Public  
Safety, Lufkin  
**DWI**

3



ARRESTING OFFICER: Alex T. Smith  
ARRESTING AGENCY: Texas Dept. of Public  
Safety, Ft. Stockton  
**DWI**

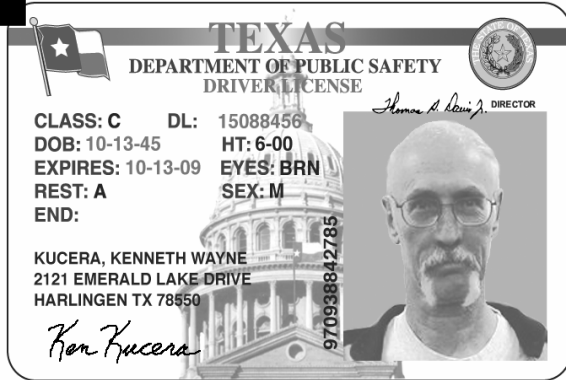
4



ARRESTING OFFICER: Richard Barron  
ARRESTING AGENCY: Lacy Lakeview Police  
Dept.  
**LAB EXAM**



5



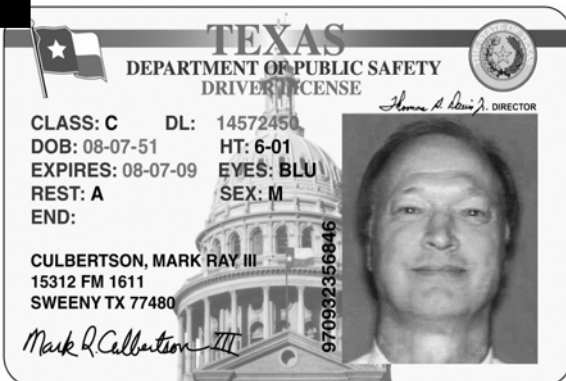
ARRESTING OFFICER: Andrew Mark Wright  
ARRESTING AGENCY: Harris County  
**DWI** Constable Precinct #4

6



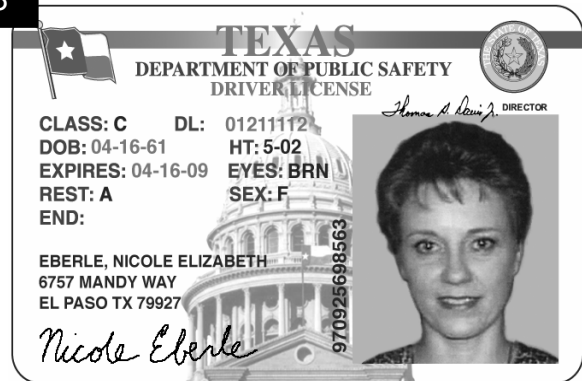
ARRESTING OFFICER: Roy Dale Osborn  
ARRESTING AGENCY: Lakeport Marshal's  
**BWI** Office

7



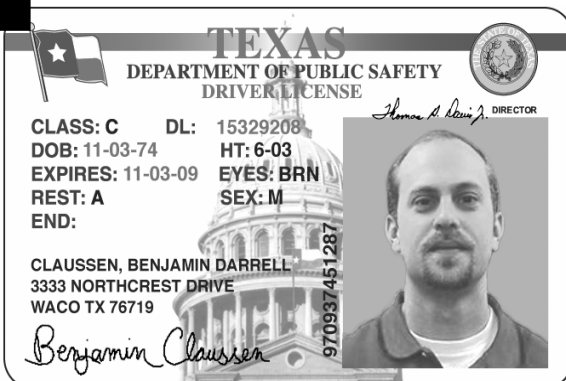
ARRESTING OFFICER: Donald Manchester  
ARRESTING AGENCY: West Columbia  
**FWI** Police Dept.

8



ARRESTING OFFICER: Dean Tucker  
ARRESTING AGENCY: Irving Police Dept.  
**DWI**

9



ARRESTING OFFICER: Brian O'Donnell  
ARRESTING AGENCY: Taylor County  
**DWI** Sheriff's Office

10

PRACTICE TEST

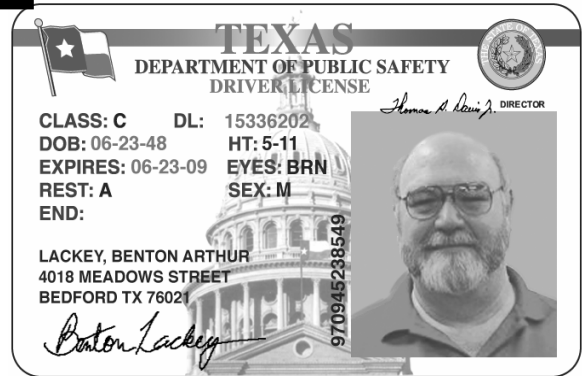
ARRESTING OFFICER:  
ARRESTING AGENCY:  
**PRACTICE TEST**

11

# PRACTICE TEST with SOLUTION CHANGE

ARRESTING OFFICER: Solution Change  
ARRESTING AGENCY:  
**PRACTICE TEST**

12



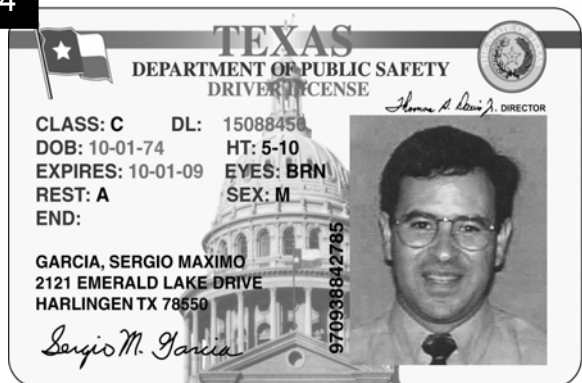
ARRESTING OFFICER: John W. O'Brian  
ARRESTING AGENCY: Wharton County  
**LAB EXAM** Sheriff's Office

13



ARRESTING OFFICER: (you)  
ARRESTING AGENCY: (your agency)  
**Intoxication Assault - Boat**

14



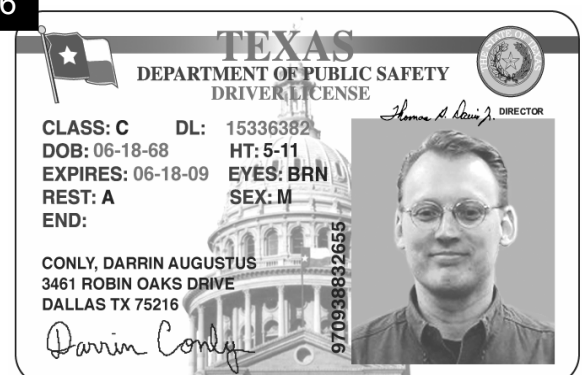
ARRESTING OFFICER: Raul Orta  
ARRESTING AGENCY: Texas Dept. of Public  
**DWI** Safety, Edinburg

15



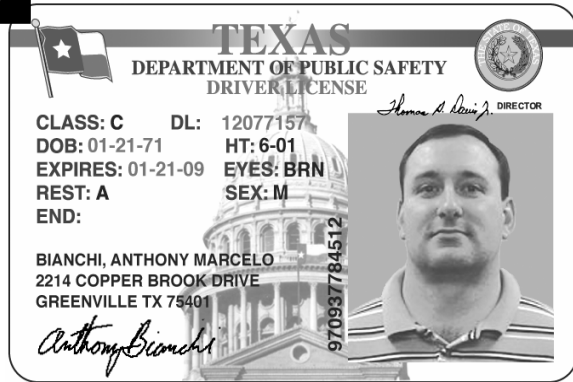
ARRESTING OFFICER: Randall Edward Jones  
ARRESTING AGENCY: South Houston  
**DWI** Police Dept.

16



ARRESTING OFFICER: Ronnie T. Garcia  
ARRESTING AGENCY: El Paso Police Dept.  
**Intoxication Manslaughter - Car**

17



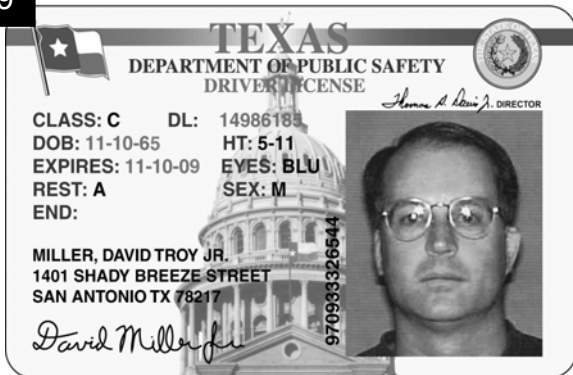
ARRESTING OFFICER: (you)  
ARRESTING AGENCY: (your agency)  
**Operating an Amusement Ride while Intoxicated**

18



ARRESTING OFFICER: James B. McDavid  
ARRESTING AGENCY: Texas Parks & Wildlife  
**BWI** Dept., Corpus Christi

19



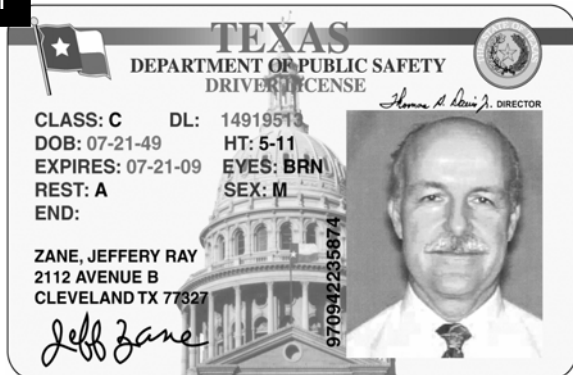
ARRESTING OFFICER: Jorge J. Martinez, Jr.  
ARRESTING AGENCY: Bexar County  
**DWI** Sheriff's Office

20



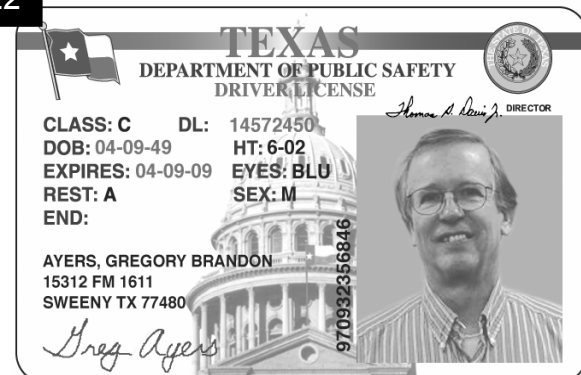
ARRESTING OFFICER: Clarice Burdett  
ARRESTING AGENCY: Texas Parks & Wildlife  
**BWI** Dept., Seguin

21



ARRESTING OFFICER: Kyle R. Dean  
ARRESTING AGENCY: Texas Dept. of Public  
**DWI** Safety, Texas City

22



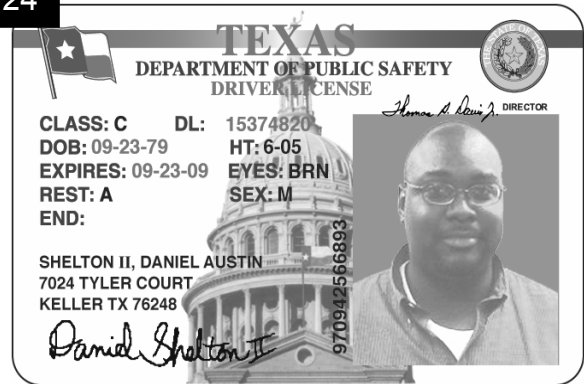
ARRESTING OFFICER: William H. Burnet  
ARRESTING AGENCY: Cleveland Police  
**Other** Dept.

23

Minor – No DL  
Robert S. Young  
Unknown DOB

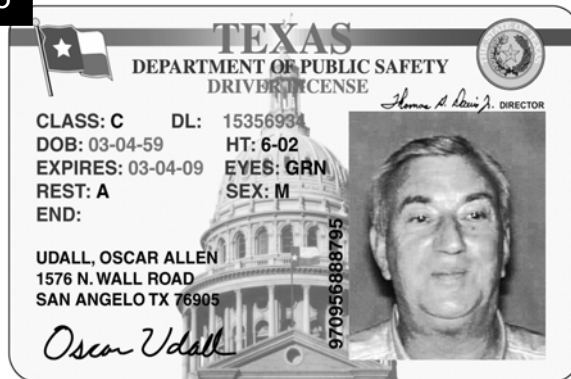
ARRESTING OFFICER: Adam Culpepper  
ARRESTING AGENCY: Texas Dept. of Public  
**DUI MINOR** Safety, Austin

24



ARRESTING OFFICER: Stanley R. Bass  
ARRESTING AGENCY: Texas Alcoholic  
**LAB EXAM** Beverage Commission,  
Wichita Falls

25



ARRESTING OFFICER: Ronald R. Andrews  
ARRESTING AGENCY: Montgomery County Sheriff's Office  
**DWI**

1. Enter the data for this test and then invalidate it by pressing the **START TEST** switch during the first **AIR BLANK**.
2. Conduct this test again and answer **Y** for yes to **REUSE DATA? Y/N**. (Note **TEST 002** printed below the operator signature.)
3. Reprint this test by entering **Alt P** while the display is scrolling.

Fill out the Laboratory Worksheet as you run the required laboratory analyses. A minimum of 30 analyses must be completed, of which at least 5 must be drinking subject analyses.

## BREATH TEST OPERATOR LABORATORY WORKSHEET

OPERATOR,	IMA	N.	SAN ANTONIO COLLEGE
LAST NAME	FIRST	MI	SCHOOL LOCATION

	MO	DAY		MO	DAY	YR
SCHOOL DATES	12	03	-	12	07	01

### REFERENCE ANALYSIS RESULTS

	PRED.	RESULT		PRED.	RESULT		PRED.	RESULT
1	0.080	0.079	11	0.080	0.080	21	0.080	0.079
2	0.080	0.080	12	0.080	0.080	22	0.080	0.079
3	0.080	0.080	13	0.080	0.079	23	0.080	0.080
4	0.080	0.078	14	0.080	0.080	24	0.080	0.080
5	0.080	0.079	15	0.080	0.080	25	0.080	0.079
6	0.080	0.080	16	0.080	0.079			
7	0.080	0.080	17	0.080	0.080			
8	0.080	0.081	18	0.080	0.080			
9	0.080	0.081	19	0.080	0.080			
10	0.080	0.080	20	0.080	0.078			

### CONTROLLED DRINKING EXERCISE

TIME OF TEST	SUBJECT'S NAME	SUBJECT RESULT #1	SUBJECT RESULT #2	SUBJECT RESULT DIFFERENCE
14:55	Richard R. Smith	0.103	0.102	0.001
15:03	Samuel K. Jones	0.110	0.113	0.003
15:09	Paul C. Brown	0.107	0.107	0.000
15:20	John P. Washington, Jr.	0.105	0.099	0.006
15:32	Wallace E. Garrison, III	0.101	0.103	0.002

### LABORATORY EXAMINATION

TEST 1			TEST 2		
SAMPLE #	PREDICTED	REFERENCE RESULT	SAMPLE #	PREDICTED	REFERENCE RESULT
1	0.080	0.078	1	0.080	0.079
2	0.080	0.079	2	0.080	0.080
3	0.080	0.080	3	0.080	0.080
4	0.080	0.080	4	0.080	0.080
5	0.080	0.081	5	0.080	0.078

THP/br-28 (Rev. 8/01)

### LABORATORY WORKSHEET

The following are some of the operational messages that will be displayed on the Intoxilyzer 5000 and the corresponding messages printed on the Test Record.

<u>Display - message</u>	<u>Test Record - message</u>	<u>Explanation</u>
<b>AMBIENT FAILED</b>	INVALID TEST PROM# GXXXX.XX CHECK AMBIENT CONDITIONS	Indicates that a contaminant was detected in an AIR BLANK step. Attempt to conduct another test.
<b>DEFICIENT SAMPLE</b>	INVALID TEST PROM# GXXXX.XX DEFICIENT SAMPLE	The subject did not provide an adequate sample within three minutes. Attempt to conduct another test.
<b>REFUSED</b>	INVALID TEST PROM# GXXXX.XX SUBJECT REFUSED TO CONTINUE	The operator entered "R" and pressed ENTER while /R was present.
<b>IMPROPER SAMPLE</b>	INVALID TEST PROM# GXXXX.XX SAMPLE INTRODUCED AT IMPROPER TIME.	The subject tried to introduce a breath sample out of sequence. Attempt to conduct another test.
<b>INTERFERENT</b>	INVALID TEST PROM# GXXXX.XX INTERFERENT DO NOT ATTEMPT TO CONDUCT ANOTHER BREATH TEST ON THIS SUBJECT. IT IS SUGGESTED THAT A BLOOD TEST BE OBTAINED.	The presence of an interfering substance was detected. <b>DO NOT ATTEMPT TO CONDUCT ANOTHER BREATH TEST ON THIS SUBJECT. It is suggested that a blood test be obtained.</b>
<b>INVALID SAMPLE</b>	INVALID TEST PROM# GXXXX.XX INVALID SAMPLE	The subject did not deliver an acceptable sample. Attempt to conduct another test.
<b>NO .02 AGREEMENT</b>	INVALID TEST PROM# GXXXX.XX NO .020 GRAMS/210 LITERS SUBJECT TEST AGREEMENT	The subject analysis results were not within 0.020 g/210 liters. Attempt to conduct another test.
<b>OUT OF TOLERANCE</b>	INVALID TEST PROM# GXXXX.XX *REFERENCE CHECK OUT OF TOLERANCE	The reference analysis result was not within tolerance of the predicted value. Check the temperature, seal, and operation of the reference sample device (simulator). Attempt to conduct another test. If the condition persists contact the Technical Supervisor.
<b>INHIBITED RFI</b>	INVALID TEST PROM# GXXXX.XX INHIBITED - RFI	The presence of a radio signal was detected in the environment. Attempt to conduct another test.
<b>INVALID TEST</b>	INVALID TEST PROM# GXXXX.XX INVALID TEST	The START TEST switch was pressed out of sequence. Attempt to conduct another test.

**For all other operational messages, contact your Technical Supervisor.**

## INTOXILYZER 5000 OPERATIONAL MESSAGES



## INTOXILYZER 5000 OPERATIONAL MESSAGES

### INVALID TESTS

The Intoxilyzer 5000 is designed to invalidate tests for a variety of reasons: the existence of an improper environmental testing condition, an improper instrument testing condition, or an operational mistake. Invalid tests are not counted as properly completed tests for laboratory credit.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001      TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00006  
SUBJECT:MORRIS,MICHAEL,R  
SUBJECT DATE OF BIRTH:03/16/60  
OPERATOR:JORDAN,L,R  
OPERATOR CERTIFICATE #:01004  
OPR AGENCY:UNIVERSITY PD  
ARST OFFICER:JORDAN L  
ARST AGENCY :UNIVERSITY PD  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

INVALID TEST  
PROM# GXXXX.XX                      11:09 CDT  
SAMPLE INTRODUCED  
AT IMPROPER TIME.

*Larry Jordan*  
\_\_\_\_\_  
OPERATOR

INVALID TEST

## REUSING PREVIOUSLY ENTERED DATA

For the test immediately following an invalid test, except for REFUSED and INTERFERENT tests, the instrument will allow the operator to reuse the previously entered data. This option will be available for up to 20 minutes after the invalid test. When the operator begins the next test, the first query will be **TYPE OF TEST**, followed by **SUB LAST NAME** as usual; however, if the last name matches the previous last name exactly, the next query will be **REUSE DATA? Y/N**. If Y for yes is entered, the next query will be **REVIEW DATA? Y/N**. The operator may review the previously entered data by entering Y; however, if the data entry from the previous invalid test appears correct, the operator may enter N for no and the sampling sequence will begin.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00007  
SUBJECT:MORRIS,MICHAEL,R  
SUBJECT DATE OF BIRTH:03/16/60  
OPERATOR:JORDAN,L,R  
OPERATOR CERTIFICATE #:01004  
OPR AGENCY:UNIVERSITY PD  
ARST OFFICER:JORDAN L  
ARST AGENCY :UNIVERSITY PD  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

ANALYSIS	ALC CONC	TIME
AIR BLANK	0.000	11:13 CDT
SUBJECT TEST	0.117	11:13 CDT
AIR BLANK	0.000	11:14 CDT
REFERENCE	0.079	11:14 CDT
AIR BLANK	0.000	11:15 CDT
SUBJECT TEST	0.119	11:15 CDT
AIR BLANK	0.000	11:16 CDT

*Larry Jordan*

OPERATOR

TEST 002

## VALID SUBJECT TEST

TEST 002 was printed on this Test Record because the data entered for this subject's last name, first name, middle initial, and date of birth was identical to the previous test. This type of test numbering will occur if the subsequent test data is entered either automatically by reusing the previously entered data or manually by reentering the data.

# INSTRUMENTATION

In this chapter, displayed messages are in **DISPLAY FONT** and CAPITALS are used for switches, keys, or keyboard entries. Instrument and reference sample device (simulator) part names are in **bold typeface**. Printed messages are in UNDERLINED CAPITALS.

## INSTRUMENT REQUIREMENTS

The Regulations place requirements on any breath alcohol testing instrument that is to be certified for evidential purposes in Texas. These requirements are:

- breath specimens collected for analysis must be essentially alveolar in composition,
- the instrument must accurately analyze a vapor sample containing a known (predicted) amount of ethyl alcohol, and
- the instrument must be adequately specific for breath alcohol analysis.

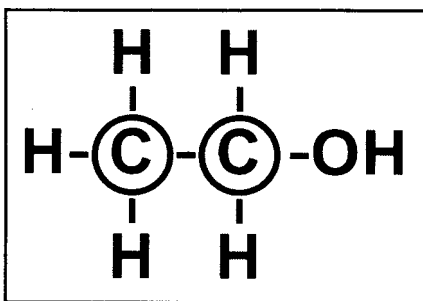
There are various analytical methods that can be used to measure the alcohol concentration in a breath specimen. The Intoxilyzer 5000 meets the Regulations' instrument requirements by using the analytical method called infrared spectrometry.

## INFRARED SPECTROMETRY

The basis of infrared breath analysis is the absorption of infrared energy by alcohol molecules in a breath specimen. Infrared radiation is a portion of the electromagnetic spectrum. Infrared wavelengths are longer than visible light and are not visible to the human eye. Spectrometry, an analytical method that measures the absorption of radiant energy by a substance, is widely used in the scientific community.

WAVELENGTH	TYPE OF RADIATION	ENERGY
short wavelength	<b>gamma rays</b> <b>x rays</b>  <b>ultraviolet</b> <b>visible</b> <b><u>INFRARED</u></b>	high energy
long wavelength	<b>microwaves</b> <b>radio waves</b>	low energy

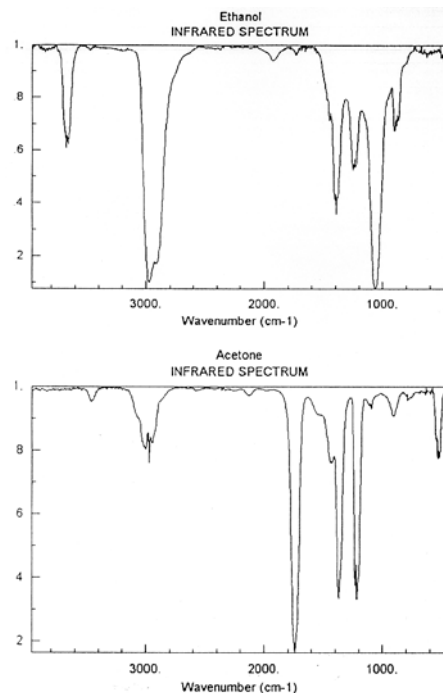
## COMPARISON OF DIFFERENT TYPES OF RADIANT ENERGY



The ethanol molecule is composed of carbon, hydrogen, and oxygen atoms that are held together by chemical bonds. These chemical bonds will absorb infrared energy in a specific manner. The specific wavelengths absorbed and the absorption pattern are unique, like a fingerprint, to a given molecule such as ethanol. The amount of infrared energy absorbed is proportional to the amount of ethanol present in a breath sample.

## SPECIFICITY

The Intoxilyzer 5000 uses multiple wavelengths of infrared energy to analyze for ethanol. Other substances, such as acetone, absorb infrared energy at some of the same wavelengths as ethanol; however, the absorption patterns of the two molecules are different. When the Intoxilyzer 5000 detects these differing absorption patterns, it will invalidate the test due to the presence of an interfering substance, display **INTERFERENT**, and print INTERFERENT DO NOT ATTEMPT TO CONDUCT ANOTHER BREATH TEST ON THE SUBJECT. IT IS SUGGESTED THAT A BLOOD TEST BE OBTAINED on the Test Record. The Intoxilyzer 5000 will not identify or measure the amount of the interfering substance. It is important to show that acetone is not present since it could be found in the breath of someone in a state of ketosis, such as an untreated diabetic or someone on a prolonged fast.



## DETERMINATION OF ALCOHOL CONCENTRATION

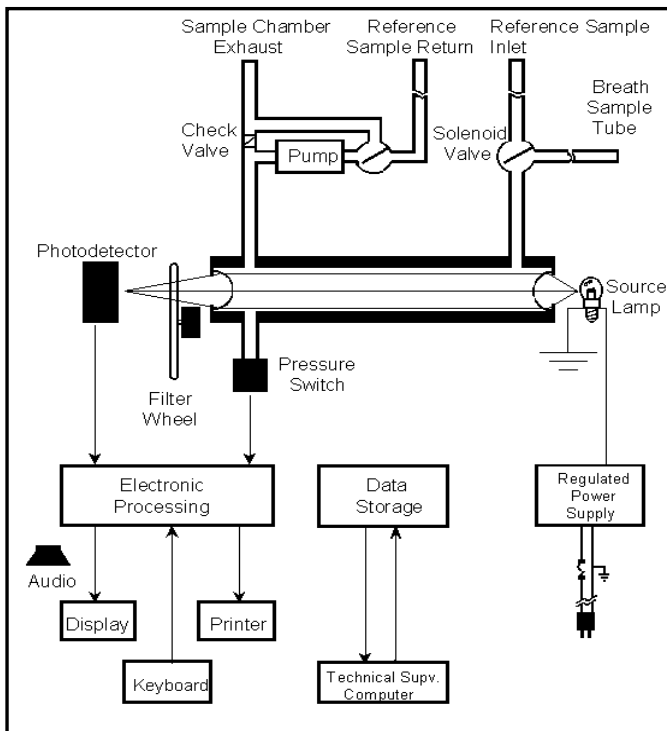
The Intoxilyzer 5000 uses a law of chemistry and physics known as the Lambert-Beer Law to determine the alcohol concentration in a breath sample. The Lambert-Beer Law states that the amount of energy absorbed by a particular substance is proportional to the number of absorbing molecules in the sample. The amount of infrared energy absorbed in a breath sample is proportional to the amount of ethanol present in a breath sample introduced into the instrument **sample chamber**.

The Intoxilyzer 5000 reports the measured alcohol concentration in grams of alcohol per 210 liters of breath, as specified by Texas statute.

## INSTRUMENT DESIGN AND FUNCTION

The instrument uses standard AC electrical power as the primary power source. The AC power is converted into regulated DC power by the **power supply board**. The regulated

DC voltage is used to power the electronic circuits in the Intoxilyzer 5000. The instrument uses an automatic gain control (AGC) system to regulate the strength of the multiple signals coming from the **photodetector**.



A **source lamp** at one end of the **sample chamber** emits a broad spectrum of electromagnetic energy including infrared. A **filter wheel** and **photodetector** are located at the opposite end of the **sample chamber**. The **filter wheel** has filters that allow only certain wavelengths of infrared energy to pass through to the **photodetector**. The **photodetector** converts the infrared energy into electrical energy. The instrument establishes a zero reference point by measuring the amount of infrared energy striking the **photodetector** when the **sample chamber** is filled with room air. If the instrument detects a contaminant in the room air, it will invalidate the test, display **AMBIENT FAILED**, and print CHECK AMBIENT CONDITIONS on the Test Record.

When alcohol is introduced into the **sample chamber**, by either the test subject or the **reference sample device (simulator)**, the amount of infrared energy reaching the **photodetector** will decrease. The decrease in the infrared energy striking the **photodetector** is directly proportional to the increase in the alcohol concentration in the **sample chamber**. The breath alcohol concentration is determined by the difference between the zero reference point and the breath sample measurement.

When the Intoxilyzer is first turned on, **NOT READY** will be displayed until the instrument is ready to begin testing. This may take 20 - 30 minutes. The Intoxilyzer 5000-68 EN is equipped with a *standby mode* that is similar to the power saver mode of some personal computers. If the instrument is on, but has not been used for a period of time, it will go into the *standby mode*. The POWER switch will remain in the depressed position, a red LED light located just below the POWER switch will be illuminated, and the display will be blank. Pressing the START TEST switch will bring the instrument out of the *standby mode*. The instrument will display **WARM UP PERIOD** and should be ready for use in about 5 - 6 minutes. The Intoxilyzer 5000-68 does not have a *standby mode*.

There are three phases to a breath test: (1) circuitry check, (2) data entry, and (3) analysis. The operator is prompted through the phases of the breath test via a **display** on the front of the instrument. When the START TEST switch is pressed the instrument will automatically conduct a circuitry check. If the instrument does not pass the circuitry check, it will display the reason for the failure, invalidate the test, and print out a report. After successful completion of the circuitry check, the instrument will proceed to the data entry

phase. The **display** will prompt the operator to input information about the subject, the operator, and the arresting officer. After the operator has completed the data entry, the instrument will automatically begin the analysis phase of the test. This phase includes air blanks, the two subject analyses, and the reference sample analysis. During the air blanks (system blank analyses) the instrument purges the **sample chamber** with room air.

The results of each test are displayed, printed, and stored in the instrument's memory.

If an improper environmental testing condition, an improper instrument testing condition, or an operational mistake is detected at any point during the test, the Intoxilyzer 5000 will stop the analysis and invalidate the test. The reason for the invalidation will be displayed and printed; no analytical results will be printed.

## DATA ENTRY

The Intoxilyzer 5000 is equipped with a **keyboard** for data entry by the operator. Instrument activity and information entered via the **keyboard** is stored in the instrument's memory and printed. Through the use of telephone modems, the stored information is periodically transferred to the Technical Supervisor's personal computer. Once the information is transferred into a database, Technical Supervisors can review the testing activity on all of the instruments under their supervision. This information cannot be used to reproduce evidential test records in the event of printer malfunctions or Test Record loss. However, the information does provide a useful tool for Technical Supervisors to monitor instrument activity and develop administrative policy to more effectively oversee breath alcohol testing activities within their supervisory areas.



The uploaded information is eventually transferred to the Department of Public Safety's Office of the Scientific Director and provides a useful statistical tool for program management at the state level. The ability of the Scientific Director and the Technical Supervisor to make full use of this statistical data requires the operator to accurately enter data using approved methods and abbreviations.

## BREATH SAMPLE REQUIREMENTS

To satisfy the Regulations' requirement that the breath sample be essentially alveolar, the Intoxilyzer 5000 has three requirements for each breath sample. First, the subject must blow with sufficient **pressure** to sound the tone in the instrument. Second, this pressure must be maintained continuously for a minimum **time**. Third, the **slope** detector, which monitors the rate of change in the alcohol concentration of the breath sample, must be satisfied.



As long as the instrument remains in a subject analysis step, the operator may attempt to have the subject provide an adequate and acceptable breath sample. The Intoxilyzer 5000 allows approximately three minutes for the operator to obtain an adequate breath sample. If the subject does not satisfy all of the breath sample requirements within three minutes, the Intoxilyzer 5000 will invalidate the test, display **DEFICIENT SAMPLE**, and print DEFICIENT SAMPLE on the Test Record. If the subject does not provide an acceptable breath sample, the Intoxilyzer 5000 will invalidate the test, display **INVALID SAMPLE**, and print INVALID SAMPLE on the Test Record.

If **PLEASE BLOW/R** is flashing on the **display** and the subject refuses to complete the test, the operator should press R on the **keyboard** and the instrument will invalidate the test, display **REFUSED**, and print SUBJECT REFUSED TO CONTINUE on the Test Record.

If the subject blows into the instrument with sufficient pressure to sound the tone, but then refuses to complete the test, the operator should wait (approximately three minutes) and the Intoxilyzer 5000 will invalidate the test, display **DEFICIENT SAMPLE**, and print DEFICIENT SAMPLE on the Test Record.

If the subject blows into the instrument at a time when the **display** is not scrolling or flashing **PLEASE BLOW**, the Intoxilyzer 5000 will invalidate the test, display **IMPROPER SAMPLE**, and print SAMPLE INTRODUCED AT IMPROPER TIME on the Test Record.

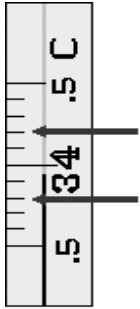
The instrument pauses after the reference sample analysis to ensure that there is a minimum of two minutes between the two subject breath samples. It is important that the operator attempt to obtain two similar breath samples because the Intoxilyzer 5000 will invalidate a test if the difference between the two breath samples is greater than 0.020 g/210 L. If the difference between the two breath samples is greater than 0.020 g/210 L, the instrument will invalidate the test, display **NO .020 AGREEMENT**, and print NO .020 SUBJECT TEST AGREEMENT on the Test Record.

## REFERENCE SAMPLE DEVICE (SIMULATOR)



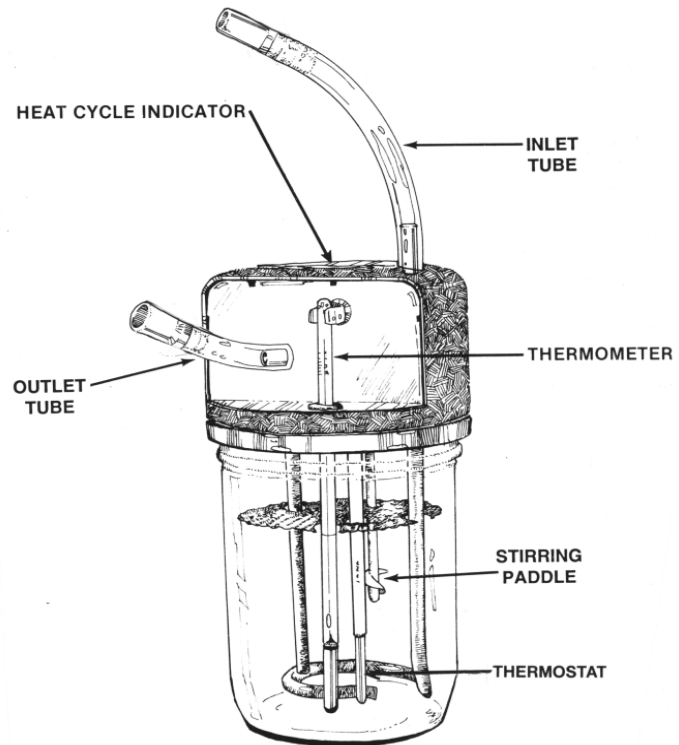
The **reference sample device**, also known as the **simulator**, is designed to deliver a sample of vapor containing a known or predicted amount of ethyl alcohol. The **reference sample device** is used to verify the accuracy and calibration of the instrument. A reference analysis is conducted as a part of each subject test to ensure that the instrument is properly calibrated.

The theory of operation of any **reference sample device** is based upon the scientific law first proposed by William Henry in 1803. According to Henry's Law, at a given temperature, the amount of alcohol in the air (reference sample) is proportional to the amount of alcohol in the water (reference solution). If the solution temperature is low, the reference results will be low. If the solution temperature is high, the reference results will be high.



The proper operating temperature for the **reference sample device** is  $34^{\circ}\text{C} \pm 0.2$  ( $33.8^{\circ}\text{C}$  to  $34.2^{\circ}\text{C}$ ), which is approximately  $93.2^{\circ}\text{F}$ . The reference analysis result must agree with the predicted value of the reference solution within  $\pm 0.010$  g/210 L. If the reference analysis result is more than  $\pm 0.010$  g/210 L of the predicted value, the instrument will invalidate the test, display **OUT OF TOLERANCE**, and print \*REFERENCE CHECK OUT OF TOLERANCE on the Test Record. The reference result will then scroll across the **display** repeatedly until the START TEST switch is pressed.

Several **reference sample devices (simulators)** are approved for use in Texas. While the configuration varies from device to device, all have several components in common. The operator may verify the correct temperature by observing the **thermometer** on the front of the device. The **thermostat** maintains the reference solution at  $34^{\circ}\text{C} \pm 0.2$ . The **stirring paddle** rotates to maintain an even temperature throughout the solution. The operation of the **stirring paddle** indicates that power is getting to the **reference sample device**. The **heat cycle indicator** is on when the heating element is on. This light will cycle on and off while the proper temperature is being maintained. The **inlet tube** and **outlet tube** channel air through the **reference sample device** and to the Intoxilyzer 5000 for analysis.



The Technical Supervisor prepares solutions for use in the **reference sample device**. The solution in the **reference sample device** should be changed as directed by the Technical Supervisor or as needed.

## OTHER INTOXILYZER 5000 OPERATIONAL SAFEGUARDS

If the presence of a radio signal is detected during an analysis, the Intoxilyzer 5000 will invalidate the test, display **INHIBITED RFI**, and print INHIBITED RFI on the Test Record.

If the START TEST switch is pressed out of sequence, the instrument will invalidate the test, display **INVALID TEST**, and print INVALID TEST on the Test Record.



## CHANGING THE REFERENCE SOLUTION

The reference solution is normally changed by the Technical Supervisor. However, the following procedure should be followed if the Technical Supervisor requests that the operator change the solution:

1. Ascertain that a fresh reference sample solution is available.
2. Unplug the **reference sample device (simulator)**.
3. Notice how the tubing between the **reference sample device** and the Intoxilyzer 5000 is connected.
4. Disconnect the tubing.
5. Unscrew the top.
6. Pour out the old solution.
7. Pour a new solution into the glass jar.
8. Replace top on jar.
9. Check seal by blowing into the **inlet tube** and blocking the **outlet tube**.
10. Plug into an electric outlet. Check to see if the **stirring paddle** is turning.
11. Connect the **inlet** and **outlet tubes** to the Intoxilyzer 5000 as noted in step 3. If you are unsure, call your Technical Supervisor now!
12. Wait for the solution temperature to reach  $34^{\circ}\text{C} \pm 0.2$  ( $33.8^{\circ}\text{C}$  to  $34.2^{\circ}\text{C}$ ).
13. Run a practice test on the new solution. Enter SOLUTION CHANGE at the **ARREST OFFICER** prompt.
14. Save the reference solution bottle for the Technical Supervisor.

# ETHANOL

## INTRODUCTION

Ethanol is perhaps the world's most studied drug and possibly the oldest known drug. It has been present in most civilizations throughout the history of mankind. This chapter describes the effects of ethanol on the human body, the factors affecting the alcohol concentration within a person, and the role of tolerance in relation to impairment.

## WHAT IS ETHANOL?

Ethanol is classified as an *alcohol*. There are many different types of alcohols and each has a unique molecular structure with specific chemical properties associated with that structure. The three most common alcohols are methanol (methyl alcohol), ethanol (ethyl alcohol), and isopropanol (isopropyl alcohol).

Ethanol is the type of alcohol in alcoholic beverages. It is also referred to as ethyl alcohol, grain alcohol, spirits, or simply alcohol. Throughout this text, the terms *alcohol*, *ethyl alcohol*, and *ethanol* will be used interchangeably. Regardless of the term used, ethanol is a drug that affects human behavior and performance.

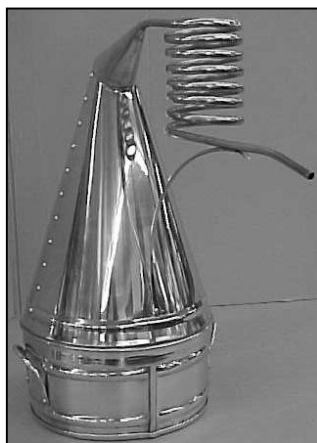


*All alcohols are toxic.* The reason ethyl alcohol is used in alcoholic beverages is that it is not as toxic as other alcohols. Consumption of even small amounts of methyl alcohol or isopropyl alcohol can have life threatening implications. This toxicity is due to the chemicals formed when methanol and isopropanol are chemically changed, or metabolized, by the body. The body changes ethyl alcohol into acetaldehyde and then immediately to acetic acid, which in turn is metabolized and eliminated as carbon dioxide and water. Acetaldehyde normally does not accumulate in the body since the metabolism rate of the acetaldehyde is 4-5 times greater than the metabolism of ethyl alcohol.

At room temperature ethyl alcohol is a clear, colorless liquid that has a slight odor and is *miscible* with water. Miscible means the alcohol and water will mix in all proportions. Ethanol is used as a solvent, an antiseptic, or as an additive in certain fuels. Alcohol is found in some medications and mouthwashes. Regardless of the source, whiskey or cold medication, the effects of alcohol on the human body are the same.

## ALCOHOLIC BEVERAGES

Alcohol can be produced by various methods. By law, production of alcoholic beverages always begins with the process of *fermentation*. Fermentation is the procedure by which yeast consume sugar or starch, and in turn, excrete ethanol. Beer and wine are produced through this process. The maximum alcohol concentration produced by this method is about 12-15% because any higher alcohol concentration kills the yeast.



In order to manufacture a beverage with a higher alcohol content, such as rum, vodka, gin, and whiskey, the alcohol mixture produced from fermentation must be distilled. *Distillation* is the controlled vaporization and collection of a substance, in this case ethyl alcohol. This process concentrates the ethanol so that the final product has a concentration higher than the original fermented mixture. Depending on the fermented mixture used, the aging process, and type of flavorings added, different types of alcoholic beverages are produced. For example, brandy is distilled from wine; gin is made from grain and flavored with the juniper berry.

## HOW ALCOHOL IS MEASURED

In the United States the ethanol concentration of distilled beverages is designated by the proof system. Proof is twice the percentage of the alcohol content by volume. For example, Brand "Z" Whiskey is 101 proof, which means its alcohol content is 50.5% by volume. Conversely, a beverage whose alcohol content by volume is 40% would be 80 proof.

$$\text{Proof} = 2 \times \% \text{ Alcohol by Volume}$$

The alcohol content of beer and wine are usually reported in terms of percent volume of alcohol. Beer, ale, and malt liquor are not required to label their product with the alcohol content. Most beers have less than about 5% alcohol by volume. Wines typically have about 10-12% alcohol by volume.

The alcohol content varies with the drink. For purposes of this text, one "drink" equals one 12 ounce serving of regular beer, one and a quarter ounces of 80 proof distilled spirits, or 5-6 ounces of wine. Each of these drinks contains approximately the same amount of alcohol. If any one of these is consumed in the same period of time, it will have about the same effect upon the body.



## FATE OF ALCOHOL IN THE BODY

Most of the substances consumed by humans can be classified either as a food, a drug, or a poison. Ethanol can be considered all three.

- ◆ It's a *food* because the body uses it to produce energy. The unit of energy is the calorie. One gram of alcohol will provide about 7 calories. These calories are known as empty calories because they cannot be stored as fat, nor do they provide anything further in the way of nutrition.
- ◆ It's a *drug* because of its *depressant* effect upon the central nervous system. Ethyl alcohol hinders the smooth, rapid transmission of nerve impulses, which in turn affects a person's behavior and performance. Continued use of ethanol can lead to dependence on the drug.
- ◆ It's a *poison* because even small amounts damage and irritate tissue. Larger doses can cause coma and death. Prolonged heavy use can lead to many health problems.

## ABSORPTION

Ethanol can enter the body by *injection*, *inhalation*, or *ingestion*. Injection of ethyl alcohol can be extremely dangerous; however, inhalation of ethanol vapor does not lead to any significant accumulation of alcohol in the body, so the most common route of entry is ingestion of an alcoholic beverage. Regardless of the route of entry, ethyl alcohol is readily absorbed into the various tissues and organs of the body by the process of simple diffusion across *mucous membranes*. Ethanol is *absorbed*, not digested.

The absorption of ethyl alcohol begins immediately following the introduction of the alcoholic beverage into the digestive system. Ethanol is readily absorbed through all mucosal surfaces, including the oral cavity and gastrointestinal tract.

Immediately after a sip of an alcoholic beverage, the breath would indicate a high alcohol content. If analyzed, this breath sample would not be an accurate reflection of the alcohol concentration in the person's body. This is sometimes referred to as *residual alcohol* or mouth alcohol.

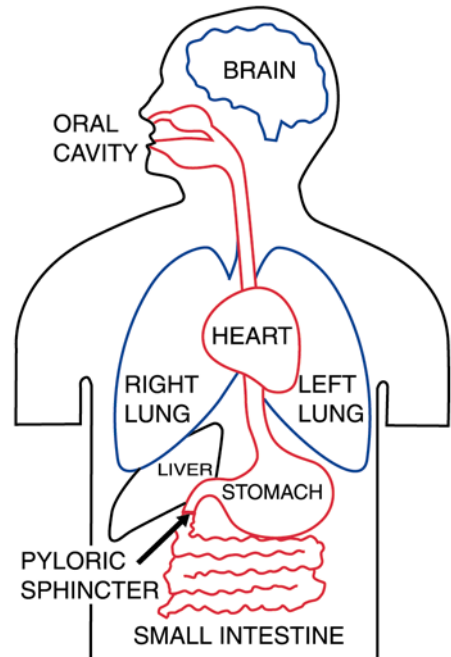
Residual alcohol diminishes rapidly and is gone within a few minutes. Proper testing procedures combined with current evidential breath alcohol testing devices eliminate residual alcohol from the test result.





After passing through the mouth, the ethanol travels to the stomach. If alcohol is present in the stomach and some of it is regurgitated back into the mouth, a portion of that dose will be absorbed in the mouth. Regardless of how ethanol is introduced into the mouth, the presence of residual alcohol is gone in less than 15 minutes.

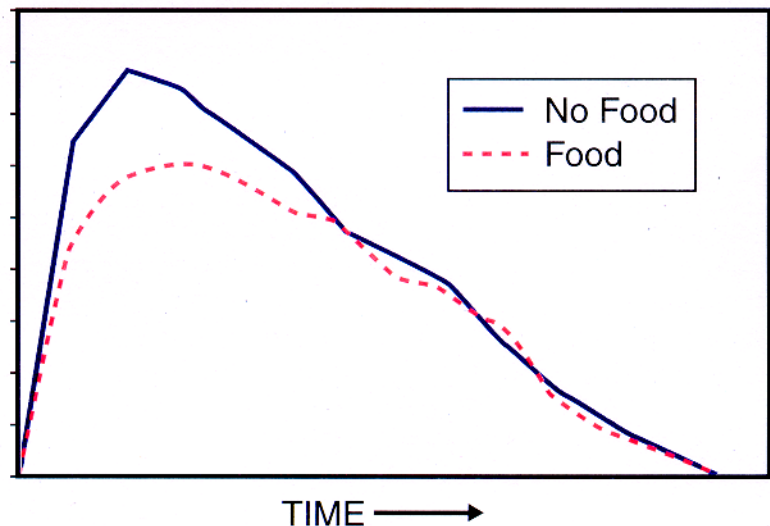
A portion of the ethyl alcohol can be absorbed into the body from the stomach. The length of time the ethanol remains in the stomach before being passed on to the remainder of the gastrointestinal tract can vary due to several factors. The most significant factor is the amount of *food* in the stomach. The *pyloric sphincter* controls the passage of material from the stomach to the small intestine. On a full stomach, the pyloric sphincter remains closed longer. Ethanol remains in the stomach for a longer period of time, delaying its absorption. Slowing the alcohol absorption decreases the peak alcohol concentration, may prolong the time to reach the peak concentration, and reduces the impact of that alcohol on the person.



The type of food may affect the absorption rate, but the amount of food is the most significant factor. Even on a full stomach the peak alcohol level is usually reached within 30 to 40 minutes after the last drink.

From the stomach the ethyl alcohol enters the small intestine. Ethyl alcohol is rapidly absorbed into the body by the small intestine. The *small intestine* is

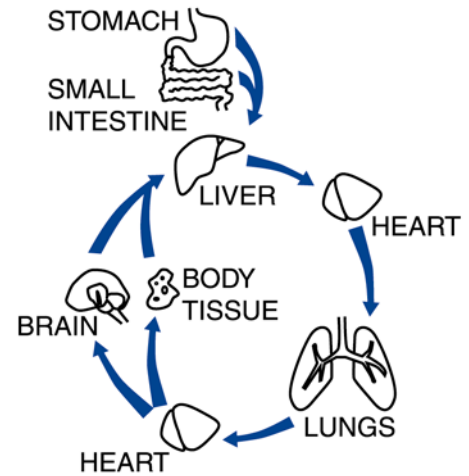
where most of the alcohol is absorbed into the body. Ethanol is rather unique in that it is not digested, or broken down into smaller parts, but rather it is absorbed unchanged through the process of simple diffusion.



## THE DISTRIBUTION PROCESS

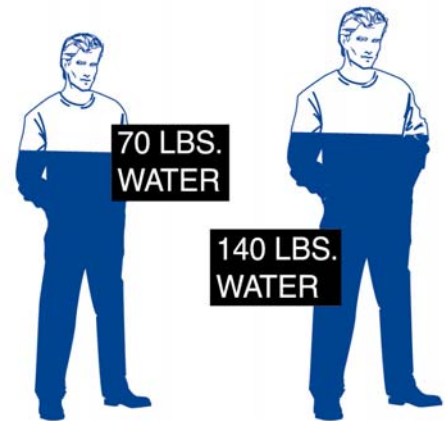
Once ethanol has been absorbed it is distributed throughout the body. The ethanol travels through the liver, then is distributed to the various body tissues. A portion of the ethyl alcohol quickly reaches the brain tissue.

The amount of ethanol in the organs and tissues depends on the water content of each tissue or organ. Since ethyl alcohol is miscible with water, it will rapidly diffuse from an area of high alcohol concentration to an area of low concentration.



## BODY TYPE AND TOTAL BODY WATER

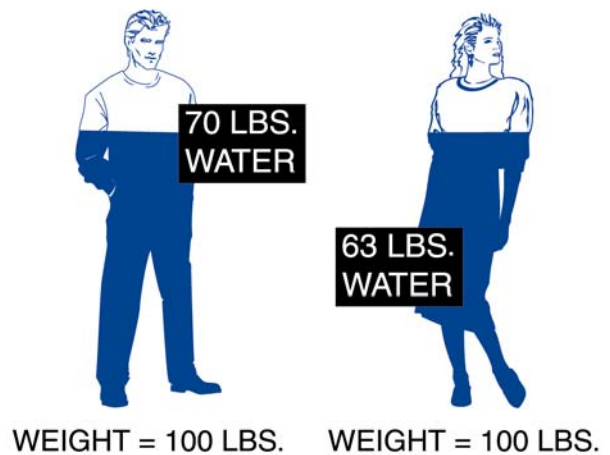
The total amount of water in the body can vary from one individual to another based upon the weight (mass) of the person. Assuming the same body type, a 200 pound man must consume more ethanol than a 100 pound man to reach the same alcohol concentration. This is because the 200 pound man has more body water to dilute the alcohol.



The amount of fat tissue also affects the total amount of body water. Since fat tissue has very little water it does not absorb ethyl alcohol. A 200 pound obese person will have less body water to dilute the alcohol, than a 200 pound lean person.

## GENDER MAKES A DIFFERENCE

Total body water content also varies according to gender. On average, women have less body water than men do on a per pound basis due to body composition. The same ethanol intake in terms of body weight results in a higher alcohol concentration in women than in men. For example, a 100 pound man would have to consume more alcohol than a 100 pound woman to achieve the same concentration, because the man has more water in his body with which to dilute the ethyl alcohol.



## THE ELIMINATION PROCESS

Ethanol is removed from the body through metabolism and excretion. The majority of ethanol is metabolized (oxidized) by the *liver*. There is also evidence to indicate that a small amount of alcohol is eliminated in the gastrointestinal tract, particularly the stomach. As ethanol passes through the liver a portion is oxidized. The liver is responsible for metabolizing almost all of the ethyl alcohol that enters the body.

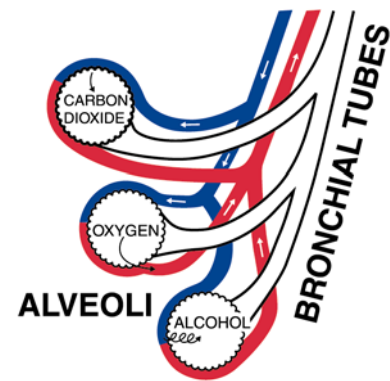
An individual's rate of metabolism is fairly constant, but the *elimination* rate can vary from person to person. The range of reported elimination rates varies from about 0.012-0.030 g/210 L per hour. The higher rates usually occur in alcohol abusers or alcohol dependent persons.



Currently, there is no way to change an individual's rate of elimination. Hot coffee, a cold shower, or vigorous exercise cannot alter the rate of elimination. The only way to sober up is through time. The body needs a sufficient amount of time to metabolize and excrete the ethanol that was consumed.

Since ethyl alcohol is miscible with water, a small portion of the ethanol is excreted unchanged in urine, sweat, and breath. Excretion of ethanol in the breath is the basis of the breath alcohol test. The exchange of oxygen and carbon dioxide occurs in the small tissue sacs of the lungs called the *alveoli*. When alcohol is present in the body, a portion of that alcohol will be eliminated in the breath because the ethanol can readily pass through the thin alveolar membrane and be exhaled in the breath. The concentration of the alcohol in the alveolar breath is proportional to the amount of ethanol in the body.

A pure alveolar sample is impossible to collect; therefore, an essentially alveolar breath sample is collected and analyzed. The essentially alveolar sample will contain a lower alcohol concentration than a pure alveolar sample. Consequently, an essentially alveolar breath sample will benefit the individual taking the breath alcohol test.

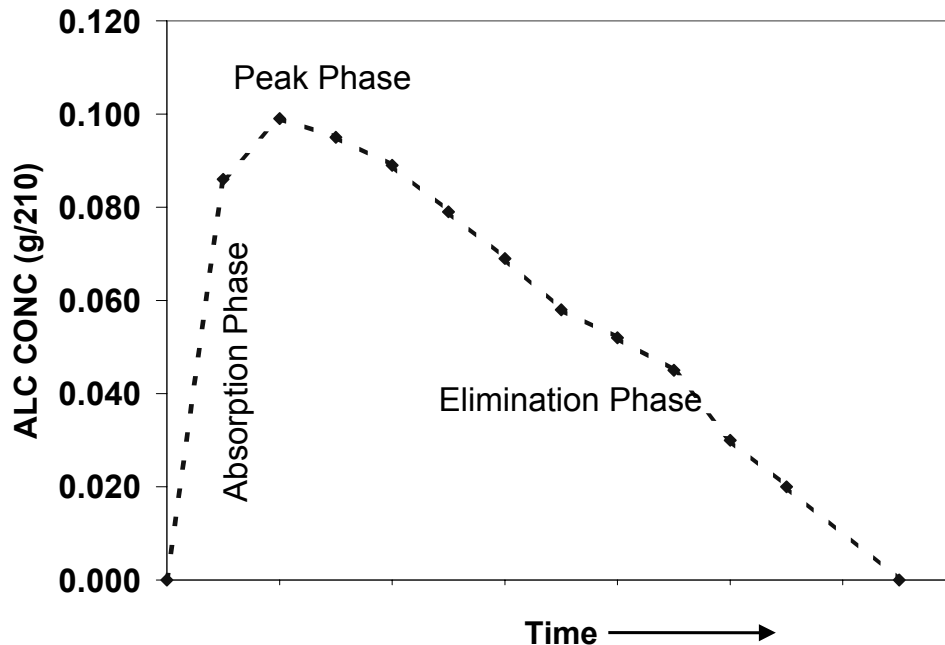


## PUTTING IT ALL TOGETHER

Absorption, distribution, and elimination have all been discussed. Combining all these factors creates the *alcohol concentration curve*. Elimination begins immediately after the introduction of alcohol during the absorption phase. However, when the rate of absorption exceeds the rate of elimination, the amount of alcohol in the body will increase. After the drinking stops, at some point the amount of alcohol absorbed will equal the amount being eliminated, which results in the peak alcohol concentration. During the elimination phase the amount of alcohol absorbed, if any, is less than the amount eliminated, so the alcohol concentration in the body will gradually decrease over time. The shape of the alcohol

concentration curve will vary according to all the factors that affect absorption, distribution, and elimination of ethyl alcohol.

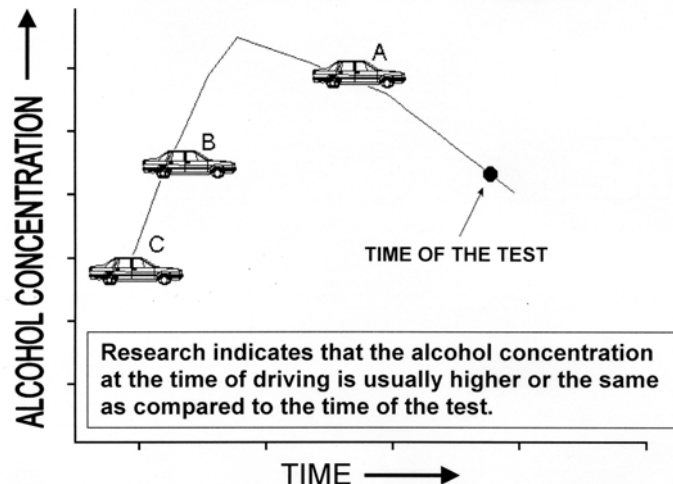
### THEORETICAL ALCOHOL CONCENTRATION CURVE



Depending on the various factors of absorption, distribution, and elimination of ethanol in the body, there are three possibilities when estimating the alcohol concentration at a time prior to the test.

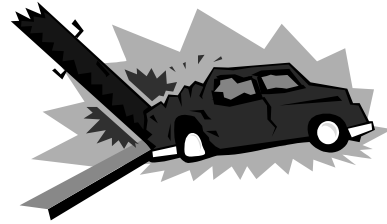
The graph indicates that the alcohol concentration may be higher when driving (Car A) than at the time of the test. In this case the person was in the elimination phase between the two points indicated. The graph also shows the concentration may be the same at both driving and time of test (Car B). This time the amount of alcohol absorbed was equal to the amount eliminated. The last example (Car C) shows that the alcohol level when driving may be lower than at the time of the test. In this example, the person was in the absorption phase and the alcohol concentration was rising. Research indicates that the breath alcohol concentration is usually the same or higher at the time of driving compared to the time of the test.

### COMPARING ALCOHOL CONCENTRATION WHEN DRIVING TO TIME OF TEST



## ETHANOL AND DRIVING PERFORMANCE

The relationship between alcohol and driving has been studied and analyzed for decades. From both epidemiological studies (surveys of accident data) and controlled studies of alcohol and driving skills, it has been clearly shown that ethyl alcohol impairs a person's driving performance.



## THE CENTRAL NERVOUS SYSTEM



The central nervous system (CNS) is the site where alcohol exerts its effects. The CNS is composed of the brain and the spinal cord and is responsible for transmitting nerve impulses to the various muscles and organs of the body. Ethanol acts as a *depressant* on the CNS, not as a stimulant.

It is not the alcohol in the peripheral areas of the body which impairs a person's coordination, but the alcohol concentration in the CNS tissue. In the CNS, the alcohol acts to depress nerve transmission and to reduce coordination between various nerve centers.

Alcohol impairs driving ability. Research has demonstrated that impairment of the most important driving skills can occur at ethanol concentrations well below 0.08 g/210 L. Operating a motor vehicle involves judgment, attention, psychomotor skills, vision, perception, tracking (steering), and information processing.

Judgment *The first effect of alcohol is the impairment of judgment.* Since the site of action for ethanol is the brain it follows that mental faculties are affected before physical faculties. Judgment is a general name given to various decision-making aspects of human behavior.

Alcohol affects the brain in reverse order of how the brain develops. So the higher levels for brain function such as judgment, logic, and reason are affected first, and the lower involuntary functions, such as respiration and digestion, are affected last.

Alcohol depresses learned social and cultural inhibitions. Consumption of alcohol also results in an impairment of self-evaluation. Self-evaluation is the ability of an individual to judge his own behavior or performance. Alcohol has the ability to create a feeling of euphoria or a sense of well being. Because of this artificial sense of well being, combined with an increase in the pain threshold, an intoxicated individual may ignore minor or even serious injuries. Another aspect of judgment affected by alcohol is risk assessment. Intoxicated individuals will take greater risks than when sober.

Attention The ability to divide attention between two or more sources of information is a basic requirement of safe driving. Impairment of attention has been found at levels well below 0.08 g/210 L alcohol concentration.



Psychomotor Skills Psychomotor skills are motor actions (physical faculties) proceeding directly from mental activity. The degree of impairment demonstrated by the traditional roadside tests such as walking and balancing can depend on the drinking experience of the driver.

Vision Ethanol depresses the coordination between the muscles that control the eyes. This lack of muscle coordination leads to blurring and double vision. Intoxicated individuals tend to narrow their visual field. Ethanol decreases the field of peripheral vision so drivers fail to perceive important peripheral events. Impairment of vision has been found at levels well below 0.08 g/210 L alcohol concentration.



Perception The ability to interpret complex sensory information can be adversely affected by ethanol. Impairment of perception has been found at levels well below 0.08 g/210 L alcohol concentration.

Tracking Tracking, or steering, is a relatively difficult task. The driver must maintain the vehicle within the lane limits and in the correct direction while monitoring the driving environment for other important information. The ability to steer is very susceptible to ethanol impairment, and impairment has been found at levels well below 0.08 g/210 L alcohol concentration.

Information Processing Ethanol slows the rate of information processing by the brain. This effect has been noted on many different kinds of tasks. If there are two or more stimuli and if several responses are possible, response times lengthen significantly. Alcohol impaired drivers require more time to read a street sign or to recognize and respond to a traffic signal. Impairment of information processing has been found at levels well below 0.08 g/210 L alcohol concentration.

At an alcohol concentration of 0.080 g/210 L or more, current research has shown that all persons are impaired with regard to the safe operation of a motor vehicle.

*There is no safe level of alcohol with regards to driving!* Both epidemiological and laboratory studies indicate even low ethanol concentrations may impair safe operation of a motor vehicle.

## **TOLERANCE**

Tolerance is usually defined as the effect that results from the chronic use of a drug when a larger dose becomes necessary to achieve the desired effect. However, in discussing alcohol tolerance it is sometimes more convenient to reverse this definition and consider tolerance as the absence of expected changes in behavior or impairment in performance

of a specific task. There are two general types of tolerance: natural tolerance and learned tolerance.

Natural Tolerance Natural tolerance consists of three areas: inborn tolerance, physical tolerance, and stress tolerance.

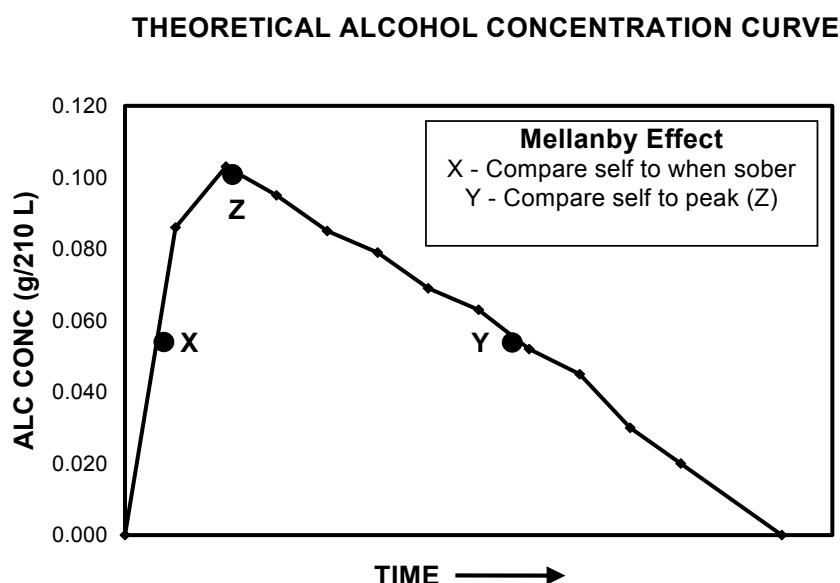
- ◆ Certain individuals demonstrate a natural inborn (genetic) tolerance to low alcohol concentrations. This type of tolerance is most prominent in very low alcohol concentrations.
- ◆ Another form of natural tolerance is physical tolerance. The effect of a given alcohol concentration will always be greater in persons who are ill as compared to the same persons when healthy. These individuals' normal physical and mental faculties are already affected due to their sickness, and this adds to the effects of the alcohol.
- ◆ Another form of natural tolerance is stress tolerance. In high stress or anxiety situations adrenaline is released in the human body to stimulate the body's response to the source of stress. In intoxicated individuals, this can result in those persons appearing less intoxicated than they really are. Stress tolerance is only a temporary effect lasting for a few minutes.



Learned Tolerance Learned tolerance consists of three areas: behavioral tolerance, acquired tolerance, and acute tolerance.

- ◆ Behavioral tolerance is a result of the influence of the social setting and the social customs associated with alcohol consumption in a particular situation. An individual will behave differently in different social settings even though the alcohol concentration in that person is the same on both occasions. Mood or sense of well being also influences a person's behavior at a particular alcohol concentration. A person who is depressed and unhappy is usually more depressed and unhappy following the consumption of alcohol. This effect is usually best observed at low levels of alcohol concentration, because higher levels may alter the person's perception of reality.
- ◆ Another type of learned tolerance is acquired tolerance. Acquired tolerance results from the chronic use of alcohol. These individuals are indeed impaired in judgment, reaction, and coordination, but have learned through experience to disguise their outward appearance of intoxication. A novice drinker (one who has little or no experience with alcohol) will demonstrate greater outward effects than those expected at a given alcohol concentration. This is due to the absence of an acquired tolerance.

- ♦ The last type of learned tolerance is acute tolerance, or sometimes called the Mellanby Effect. Acute tolerance is the result of a person comparing his present condition with his past condition. In the absorption phase of the alcohol curve (position X), the individual compares his perceived state with when he was alcohol free. His perception has been altered so that the effects of the alcohol are overestimated. Later during the elimination phase (position Y) the same person compares his present perceived state with his peak alcohol concentration (position Z) and the effects of the alcohol are underestimated. In both instances the alcohol concentrations were equal and the person equally impaired. Since the individual perceives himself as less intoxicated during the elimination phase, this person is a greater risk when operating a motor vehicle. The person has lost the ability to accurately judge his performance.



Because of the various aspects of alcohol tolerance, judging an individual's intoxication can be very difficult when based solely on visual observation. Social prestige and interpersonal relationship may influence a person's judgment of another's intoxication.

Regardless of how a person appears, it is the impairment of the individual's normal physical and mental faculties that is important. An individual may consciously or unconsciously attempt to disguise his intoxication, but cannot alter the fact that his judgment, reactions, and coordination are impaired.

## ALCOHOL AND OTHER DRUGS

When ethyl alcohol is consumed in combination with other chemical agents, illicit, prescribed, or over-the-counter, the symptoms of alcohol intoxication may be altered. This may explain the situation where an individual appears very intoxicated, but the alcohol test results are low.

Combining ethanol with other drugs can produce two types of effects: additive or synergistic. When one dose of a drug is combined with one dose of ethanol and the effect is equal to no more than the sum of the effects of the two drugs, the effect is said to be



additive. A synergistic situation occurs when a drug is combined with ethanol and the end result is greater than the sum of the individual effects.

There is no known drug that can lessen the effects of ethanol on a person's driving performance.

## **IMPAIRMENT WITHOUT ETHANOL**

Ethyl alcohol is not the only agent that can produce the effects already described. Certain illnesses, diseases, or other drugs are able to produce symptoms similar to ethanol intoxication. Untreated diabetics or trauma victims may exhibit symptoms similar to ethanol intoxication.



Acetone, like ethanol, can cause impairment and may be mistaken for alcohol intoxication. Acetone can be present in an individual due to a prolonged fast, a low carbohydrate diet, or untreated diabetes. Modern evidential breath alcohol testing instruments can distinguish between acetone and ethyl alcohol, eliminating the possibility of acetone affecting the alcohol result.

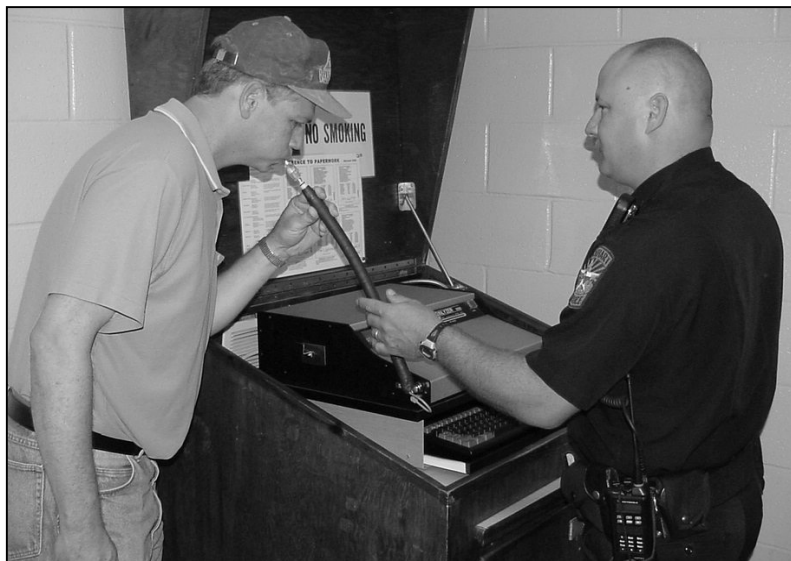
# EVIDENTIAL BREATH ANALYSES

## BEFORE CONDUCTING A SUBJECT BREATH ANALYSIS

The Texas Breath Alcohol Testing Regulations require an operator to remain in the presence of the subject at least 15 minutes just prior to the test and exercise reasonable care to ensure that the subject does not place any substances in the mouth. Be sure that this is done before conducting a subject breath analysis.

If the Intoxilyzer is not on, the operator should turn on the instrument upon arrival at the breath alcohol testing site. **NOT READY** will be displayed until the instrument is ready to begin testing. This may take 20 - 30 minutes. The Intoxilyzer 5000-68 EN is equipped with a *standby mode* that is similar to the power saver mode of some personal computers. If the instrument is on, but has not been used for a period of time, it will go into the *standby mode*. The POWER switch will remain in the depressed position, a red LED light located just below the POWER switch will be illuminated, and the display will be blank. To bring the instrument out of the *standby mode*, press the START TEST switch. The instrument will display **WARM UP PERIOD** and should be ready for use in about 5 - 6 minutes. The Intoxilyzer 5000-68 does not have a *standby mode*.

## CONDUCTING A SUBJECT BREATH ANALYSIS



Before beginning a subject analysis the operator should take a few moments to explain to the subject that the analysis has two parts, and that the subject must provide two separate breath samples in order to complete the analysis. The first sample will be analyzed then a few minutes later the second sample will be analyzed.

It is also suggested that the operator explain to the subject how to deliver an acceptable sample. The operator should instruct the subject to take a breath and provide a steady flow

of breath into the instrument. A tone will sound as long as the subject is providing an acceptable sample.

Press the green START TEST switch once. The instrument will automatically conduct a series of diagnostic checks called the circuitry check.

The following phrases will be displayed:

**PROM CHECK** (checks internal software)  
**RAM CHECK** (checks internal memory)  
**TEMP CHECK** (checks sample chamber temperature)  
**PROCESSOR CHECK** (checks microprocessor)  
**PRINTER CHECK** (checks printer response)  
**RTC CHECK** (checks clock)  
**INTERNAL 1** (checks 0.100 internal standard)  
**INTERNAL 2** (checks 0.200 internal standard)  
**INTERNAL 3** (checks 0.300 internal standard)  
**INTERNAL 4** (checks 0.400 internal standard)  
**INTERNAL 5** (checks 0.500 internal standard)

At the end of this diagnostic sequence the **display** should read **CIRCUITRY OK**. If the instrument detects an incorrect parameter during these checks the testing sequence will be terminated.

## DATA ENTRY

After a successful circuitry check a series of prompts will be displayed. After each entry press the ENTER key to accept the entry. Never use a comma or period. Do not enter extra spaces.

**TYPE OF TEST - ENTER 1 FOR DWI, 2 FOR BWI, 3 FOR DUI MINOR, 4 FOR PRACTICE TEST, 5 FOR LAB EXAM, 6 FOR OTHER**

Enter the number (1-6) that corresponds most closely to the type of test to be conducted. Type of test entries 1, 2, 3, and 6 are used for statistical purposes only. The Test Record will not reflect the selection of these entries. Type of test **6 FOR OTHER** should not be used for persons arrested for public intoxication. Persons arrested for public intoxication should not be tested on the Intoxilyzer 5000.

When 4 is entered for a practice test, the instrument will automatically enter the next four queries. PRACTICE TEST will be entered for the **SUB LAST NAME**, a space will be entered for the **SUB FIRST NAME**, a space will be entered for the **SUB MIDDLE INIT**, and the current date will be entered for the **DATE OF BIRTH**. The next query displayed will be **OPER LAST NAME**. The remaining queries will be displayed in their normal order. When the data entries are reviewed, all of the entries may be changed; however, when 4 is entered for a practice test, the **SUB LAST NAME**, automatically entered as PRACTICE TEST, cannot be changed.

When 5 is entered for a Lab Exam, the words LAB EXAM will be printed on the Test Record above the line provided for the operator's signature.

**SUB LAST NAME** Enter the subject's last name. Enter JR, III (use letters, not numbers), etc., as part of the subject's last name (example: SMITH JR or WILSON III). Hyphenated last names are permitted (example: SMITH-JONES). Omit apostrophes in names, as this is an inactive key (O'Grady enters as OGRADY).

**SUB FIRST NAME** Enter subject's first name.

**SUB MIDDLE INIT** Enter subject's middle initial. If no middle initial, press SPACE.

**DATE OF BIRTH** Enter the subject's date of birth MMDDYY. If the D.O.B. is unknown, press ENTER. The instrument will display the current date. Press ENTER again to accept the entry.

**OPER LAST NAME** Enter the operator's last name. Enter JR or III (use letters, not numbers) as part of the operator's last name.

**OPER FIRST INIT** Enter operator's first initial.

**OPER MIDDLE INIT** Enter operator's middle initial. If no middle initial, press SPACE.

**OPER CERT NO** Enter operator's certificate number.

**OPER AGENCY** Enter the operator's agency. Use approved abbreviations.

<u>AGENCY</u>	<u>ABBREVIATION</u>	<u>ENTRY</u>
Texas Dept. of Public Safety	DPS (Duty Station)	DPS EL PASO
Texas Parks and Wildlife Dept.	TPWD (City)	TPWD TYLER
Texas Alcoholic Beverage Comm.	TABC (City)	TABC DALLAS
(City) Police Department	(City) PD	LUBBOCK PD
(City) Dept. of Public Safety	(City) DPS	MINERAL WELLS DPS
(City) Marshal's Office	(City) MO	LAKEPORT MO
(County) Sheriff's Office	(County) SO	TRAVIS SO
(County) Constable Precinct #	(County) CONST #	HILL CONST 2
North	N	N ZULCH PD
South	S	S PLAINS PD
East	E	E BERNARD PD
West	W	W ORANGE PD
DO NOT USE PERIODS OR COMMAS WHEN MAKING DATA ENTRIES. The Technical Supervisor may authorize additional abbreviations as needed.		

### APPROVED ABBREVIATIONS

**ARREST OFFICER** Enter the arresting officer's last name, SPACE, first initial as one entry (example: William D. Smith Jr. is entered SMITH JR W). Enter SOLUTION CHANGE when performing a practice test in conjunction with a solution change.

**ARREST AGENCY** Enter the arresting officer's agency using approved abbreviations.

**SUB SEX M/F?** Enter subject's gender abbreviation.

**REVIEW DATA? Y/N** This step allows the operator to review and change any entry. Enter Y, then ENTER to review the data. Press ENTER to step through the information. To correct an entry use BACKSPACE to erase, then enter the correct information followed by ENTER. Always check the data at least once to confirm the entries. Once all entries have been verified, enter N and press ENTER to continue.

## **CONDUCTING AN ANALYSIS – SAMPLING SEQUENCE**

**AIR BLANK .000** The instrument is purging the sample chamber with room air. If the instrument detects a contaminant in the room air, it will invalidate the test, display **AMBIENT FAILED**, and print CHECK AMBIENT CONDITIONS on the Test Record.

**> > >....** The instrument is establishing a zero reference point.

### **PLEASE BLOW INTO MOUTHPIECE UNTIL TONE STOPS**

**PLEASE BLOW/R** This message will flash until a breath sample is initiated or for a maximum of three minutes. If the subject refuses to provide a sample the operator should enter R followed by ENTER to indicate a refusal. The instrument will invalidate the test, display **REFUSED**, and print SUBJECT REFUSED TO CONTINUE on the Test Record. This option is only available when the **/R** is present.

**PLEASE BLOW** When a breath sample is initiated with sufficient pressure, a continuous tone will sound, the **/R** at the end of **PLEASE BLOW** will disappear, and the **display** will be constant, not flashing. If the subject starts but does not continue to deliver a sample with sufficient pressure or the subject does not blow long enough to provide a sufficient sample, **PLEASE BLOW** will continue to flash and a short tone will sound every few seconds. The subject has three minutes to deliver an adequate breath sample before the instrument invalidates the test. If the subject starts to provide a sample, then refuses to continue, **/R** is no longer available. The operator should wait for the three minutes to expire. The instrument will invalidate the test, display **DEFICIENT SAMPLE**, and print DEFICIENT SAMPLE on the Test Record.

**SAMPLE ACCEPTED** Once an acceptable sample has been delivered, the instrument will momentarily display **SAMPLE ACCEPTED**.

**AIR BLANK .000** The instrument is purging the sample chamber with room air.

**> > >....** The instrument is establishing a zero reference point.

**REFERENCE .XXX** The instrument will automatically analyze vapor from the **reference sample device (simulator)**. The result of the reference sample analysis must be within  $\pm 0.010$  g/210 L of the predicted value. The predicted value is entered by the Technical Supervisor and will be printed on each Test Record. If the reference sample result is not within tolerance, the instrument will automatically invalidate the test, display **OUT OF TOLERANCE**, and print \*REFERENCE CHECK OUT OF TOLERANCE on the Test Record. The instrument will then scroll the reference result on the **display** repeatedly until the START TEST switch is pressed.

**AIR BLANK .000** The instrument is purging the sample chamber with room air.

**PLEASE WAIT** At this point the instrument will pause to allow at least two minutes between breath samples. This is followed by another purge cycle.

> > >.... The instrument is establishing a zero reference point.

**PLEASE BLOW INTO MOUTHPIECE UNTIL TONE STOPS**

**PLEASE BLOW/R** A second sample is delivered in the same manner as the first sample.

**SAMPLE ACCEPTED** Once an acceptable sample has been delivered, the instrument will momentarily display **SAMPLE ACCEPTED**.

**AIR BLANK .000** The instrument is purging the sample chamber with room air.

**TEST COMPLETE** The instrument will verify that the results of the breath samples agree within 0.020 g/210 L. If the breath samples agree within 0.020 g/210 L the instrument will flash the subject results on the **display** three times and print the test information on the Test Record. If the results do not agree, the instrument will invalidate the test, display **NO .020 AGREEMENT**, flash the subject results on the **display** three times, and print NO .020 SUBJECT TEST AGREEMENT on the Test Record. The operator must sign the Test Record.

## **DETERMINING A PROPERLY COMPLETED TEST RECORD**

In order for the test to be considered properly completed the Test Record(s) must have all of the following:

1. No invalid messages printed on the Test Record.
2. All results clearly printed.
3. All air blank results must be 0.000.
4. The signature of the operator.

If the Test Record does not meet the first three criteria the operator should conduct the analysis again (except for interferent analyses).

**If the instrument indicates the presence of an interfering substance, no further breath alcohol analyses should be attempted on the subject. It is suggested that a blood test be requested.**

## **REUSING PREVIOUSLY ENTERED DATA**

For the test immediately following an invalid test, except for REFUSED and INTERFERENT tests, the instrument will allow the operator to reuse the previously entered data. This option will be available for up to 20 minutes after the invalid test. When the operator begins the next test, the first query will be **TYPE OF TEST**, followed by **SUB LAST NAME** as usual; however, if the last name matches the previous last name exactly, the next query will be **REUSE DATA? Y/N**.

If Y for yes is entered, the next query will be **REVIEW DATA? Y/N**. The operator may review the previously entered data by entering Y; however, if the data entry from the previous invalid test appears correct the operator may enter N for no and the sampling

sequence will begin. If the operator enters N at the **REUSE DATA? Y/N** query, **SUB FIRST NAME** will be the next query and data entry will proceed as usual.

When the data entered for the subject's last name, first name, middle initial, and date of birth are identical to the previous test, TEST 002 will be printed on the second Test Record. If the subject data entered for the next test is identical to the previous test, TEST 003 will be printed on the third Test Record and so on and so on. This type of test numbering will occur if the subsequent test data is entered either automatically by reusing the previously entered data or manually by reentering the data. If an operator conducts a second test on a subject after a refusal or interferent test, these tests will be numbered as well. A subject whose test is invalidated due to an interferent should not be retested on an Intoxilyzer.

## **REPRINTING A TEST RECORD**

To reprint a Test Record enter Alt P while the **display** is scrolling. The Intoxilyzer 5000-68 will immediately reprint the previous Test Record. The Intoxilyzer 5000-68 EN will display the query **TEST RECORD NO=**. The operator may enter the desired Test Record number of the test to be reprinted or press ENTER and the last Test Record number will be automatically displayed. The operator may edit the displayed number. When ENTER is pressed again the Intoxilyzer 5000-68 EN will print the selected Test Record.

## **INTOXILYZER TEST RECORD DISTRIBUTION**

The Intoxilyzer prints out Test Records on full sheets of paper using a standard personal computer style printer. All printed Test Records should bear the signature of the operator and be distributed according to established procedures. Leave one Test Record at the breath testing site for the Technical Supervisor for each Test Record printed by the instrument. This includes complete, incomplete, valid, and invalid tests. Attach one Test Record to the paperwork presented to the criminal prosecutor for each Test Record printed by the instrument. This also includes complete, incomplete, valid, or invalid tests. Photocopies of the Test Record may be made if additional copies are needed. The Technical Supervisor may provide you with specific routing instructions for your particular duty station.

The operator should sign and distribute all Test Records whether complete, incomplete, valid, or invalid. Test Records are used as evidence in criminal, civil, and administrative proceedings; therefore, they should be handled with care in order to preserve their integrity.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00008  
SUBJECT:HARRIS,BRENT,D  
SUBJECT DATE OF BIRTH:11/18/56  
OPERATOR:JOHNSON JR,T,J  
OPERATOR CERTIFICATE #:01005  
OPR AGENCY:DPS CHILDRESS  
ARST OFFICER:MANN A  
ARST AGENCY :CHILDRESS SO  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

ANALYSIS	ALC CONC	TIME
AIR BLANK	0.000	10:42 CDT
SUBJECT TEST	0.081	10:42 CDT
AIR BLANK	0.000	10:42 CDT
REFERENCE	0.080	10:42 CDT
AIR BLANK	0.000	10:43 CDT
SUBJECT TEST	0.079	10:44 CDT
AIR BLANK	0.000	10:44 CDT

*Terry Johnson, Jr.*

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OPERATOR

VALID SUBJECT TEST



## PRACTICE TEST

At the **TYPE OF TEST**, enter 4 for a practice test. The instrument will automatically enter the next four queries. **PRACTICE TEST** will be entered for the **SUB LAST NAME**, a space will be entered for the **SUB FIRST NAME**, a space will be entered for the **SUB MIDDLE INIT**, and the current date will be entered for the **DATE OF BIRTH**. The next query displayed will be **OPER LAST NAME**. The remaining queries will be displayed in their normal order. When the data entries are reviewed, all of the entries may be changed; however, when 4 is entered for a practice test, the **SUB LAST NAME**, automatically entered as **PRACTICE TEST**, cannot be changed. **ARREST OFFICER** is entered as **SPACE** followed by **ENTER**, unless the term **SOLUTION CHANGE** is entered following a reference solution change. **ARREST AGENCY** is entered as **SPACE** followed by **ENTER**. The operator provides the breath specimen during the **PLEASE BLOW** sequence steps. Use the operator's gender abbreviation for practice tests when prompted.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00001  
SUBJECT:PRACTICE TEST, ,  
SUBJECT DATE OF BIRTH:04/09/03  
OPERATOR:WALKER JR,H,R  
OPERATOR CERTIFICATE #:01000  
OPR AGENCY:DPS DALLAS  
ARST OFFICER:  
ARST AGENCY :  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

ANALYSIS	ALC CONC	TIME
AIR BLANK	0.000	10:42 CDT
SUBJECT TEST	0.000	10:42 CDT
AIR BLANK	0.000	10:42 CDT
REFERENCE	0.080	10:42 CDT
AIR BLANK	0.000	10:43 CDT
SUBJECT TEST	0.000	10:44 CDT
AIR BLANK	0.000	10:44 CDT

*H.R. Walker, Jr.*

OPERATOR

PRACTICE TEST

## CHANGING THE REFERENCE SOLUTION

The reference solution is normally changed by the Technical Supervisor. However, the following procedure should be followed if the Technical Supervisor requests that the operator change the solution:

1. Ascertain that a fresh reference sample solution is available.
2. Unplug the **reference sample device (simulator)**.
3. Notice how the tubing between the **reference sample device** and the Intoxilyzer 5000 is connected.
4. Disconnect the tubing.
5. Unscrew the top.
6. Pour out the old solution.
7. Pour a new solution into the glass jar.
8. Replace top on jar.
9. Check seal by blowing into the **inlet tube** and blocking the **outlet tube**.
10. Plug into an electric outlet. Check to see if the **stirring paddle** is turning.
11. Connect the **inlet** and **outlet tubes** to the Intoxilyzer 5000 as noted in step 3. If you are unsure, call your Technical Supervisor now!
12. Wait for the solution temperature to reach  $34^{\circ}\text{C} \pm 0.2$  ( $33.8^{\circ}\text{C}$  to  $34.2^{\circ}\text{C}$ ).
13. Run a practice test on the new solution. Enter SOLUTION CHANGE at the **ARREST OFFICER** prompt.
14. Save the reference solution bottle for the Technical Supervisor.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00002  
SUBJECT:PRACTICE TEST, ,  
SUBJECT DATE OF BIRTH:04/09/03  
OPERATOR:ANDERSON,S,L  
OPERATOR CERTIFICATE #:01001  
OPR AGENCY:ORANGE PD  
ARST OFFICER:SOLUTION CHANGE  
ARST AGENCY :  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

ANALYSIS	ALC CONC	TIME
AIR BLANK	0.000	15:14 CDT
SUBJECT TEST	0.000	15:14 CDT
AIR BLANK	0.000	15:14 CDT
REFERENCE	0.080	15:15 CDT
AIR BLANK	0.000	15:15 CDT
SUBJECT TEST	0.000	15:16 CDT
AIR BLANK	0.000	15:16 CDT

*Shawn Anderson*

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OPERATOR

SOLUTION CHANGE

The following are some of the operational messages that will be displayed on the Intoxilyzer 5000 and the corresponding messages printed on the Test Record.

<u>Display - message</u>	<u>Test Record - message</u>	<u>Explanation</u>
<b>AMBIENT FAILED</b>	INVALID TEST PROM# GXXXX.XX CHECK AMBIENT CONDITIONS	Indicates that a contaminant was detected in an AIR BLANK step. Attempt to conduct another test.
<b>DEFICIENT SAMPLE</b>	INVALID TEST PROM# GXXXX.XX DEFICIENT SAMPLE	The subject did not provide an adequate sample within three minutes. Attempt to conduct another test.
<b>REFUSED</b>	INVALID TEST PROM# GXXXX.XX SUBJECT REFUSED TO CONTINUE	The operator entered "R" and pressed ENTER while /R was present.
<b>IMPROPER SAMPLE</b>	INVALID TEST PROM# GXXXX.XX SAMPLE INTRODUCED AT IMPROPER TIME.	The subject tried to introduce a breath sample out of sequence. Attempt to conduct another test.
<b>INTERFERENT</b>	INVALID TEST PROM# GXXXX.XX INTERFERENT DO NOT ATTEMPT TO CONDUCT ANOTHER BREATH TEST ON THIS SUBJECT. IT IS SUGGESTED THAT A BLOOD TEST BE OBTAINED.	The presence of an interfering substance was detected. <b>DO NOT ATTEMPT TO CONDUCT ANOTHER BREATH TEST ON THIS SUBJECT. It is suggested that a blood test be obtained.</b>
<b>INVALID SAMPLE</b>	INVALID TEST PROM# GXXXX.XX INVALID SAMPLE	The subject did not deliver an acceptable sample. Attempt to conduct another test.
<b>NO .02 AGREEMENT</b>	INVALID TEST PROM# GXXXX.XX NO .020 GRAMS/210 LITERS SUBJECT TEST AGREEMENT	The subject analysis results were not within 0.020 g/210 liters. Attempt to conduct another test.
<b>OUT OF TOLERANCE</b>	INVALID TEST PROM# GXXXX.XX *REFERENCE CHECK OUT OF TOLERANCE	The reference analysis result was not within tolerance of the predicted value. Check the temperature, seal, and operation of the reference sample device (simulator). Attempt to conduct another test. If the condition persists contact the Technical Supervisor.
<b>INHIBITED RFI</b>	INVALID TEST PROM# GXXXX.XX INHIBITED - RFI	The presence of a radio signal was detected in the environment. Attempt to conduct another test.
<b>INVALID TEST</b>	INVALID TEST PROM# GXXXX.XX INVALID TEST	The START TEST switch was pressed out of sequence. Attempt to conduct another test.

**For all other operational messages, contact your Technical Supervisor.**

## **INTOXILYZER 5000 OPERATIONAL MESSAGES**

## INVALID TESTS

The Intoxilyzer 5000 is designed to invalidate tests for a variety of reasons: the existence of an improper environmental testing condition, an improper instrument testing condition, or an operational mistake.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00006  
SUBJECT:MORRIS,MICHAEL,R  
SUBJECT DATE OF BIRTH:03/16/60  
OPERATOR:JORDAN,L,R  
OPERATOR CERTIFICATE #:01004  
OPR AGENCY:UNIVERSITY PD  
ARST OFFICER:JORDAN L  
ARST AGENCY :UNIVERSITY PD  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

INVALID TEST  
PROM# GXXXX.XX 11:09 CDT  
SAMPLE INTRODUCED  
AT IMPROPER TIME.

*Larry Jordan*  
\_\_\_\_\_  
OPERATOR

INVALID TEST

## INTERFERENT TESTS

If the instrument indicates the presence of an interfering substance, no further breath alcohol analyses should be attempted on the subject. It is suggested that a blood test be obtained.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00009  
SUBJECT:SMITH,RICHARD,W  
SUBJECT DATE OF BIRTH:05/18/47  
OPERATOR:ANDREWS,C,S  
OPERATOR CERTIFICATE #:01006  
OPR AGENCY:DPS WACO  
ARST OFFICER:KENNEDY JR M  
ARST AGENCY :MCLENNAN SO  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

INVALID TEST  
PROM# GXXXX.XX 13:03 CDT  
INTERFERENT  
DO NOT ATTEMPT TO CONDUCT ANOTHER BREATH TEST ON THIS  
SUBJECT. IT IS SUGGESTED THAT A BLOOD TEST BE OBTAINED.

*Clint Andrews*

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OPERATOR

## INTERFERENT TEST

## REUSING PREVIOUSLY ENTERED DATA

For the test immediately following an invalid test, except for REFUSED and INTERFERENT tests, the instrument will allow the operator to reuse the previously entered data. This option will be available for up to 20 minutes after the invalid test. When the operator begins the next test, the first query will be **TYPE OF TEST**, followed by **SUB LAST NAME** as usual; however, if the last name matches the previous last name exactly, the next query will be **REUSE DATA? Y/N**. If Y for yes is entered, the next query will be **REVIEW DATA? Y/N**. The operator may review the previously entered data by entering Y; however, if the data entry from the previous invalid test appears correct the operator may enter N for no and the sampling sequence will begin.

INTOXILYZER 5000 INSTRUMENT  
SN 68-000001 TS AREA:099  
04/09/2003 UNIVERSITY PD  
ZZ00007  
SUBJECT:MORRIS,MICHAEL,R  
SUBJECT DATE OF BIRTH:03/16/60  
OPERATOR:JORDAN,L,R  
OPERATOR CERTIFICATE #:01004  
OPR AGENCY:UNIVERSITY PD  
ARST OFFICER:JORDAN L  
ARST AGENCY :UNIVERSITY PD  
REFERENCE PREDICTED 0.080  
CIRCUITRY CHECK OK

ANALYSIS	ALC CONC	TIME
AIR BLANK	0.000	11:13 CDT
SUBJECT TEST	0.117	11:13 CDT
AIR BLANK	0.000	11:14 CDT
REFERENCE	0.079	11:14 CDT
AIR BLANK	0.000	11:15 CDT
SUBJECT TEST	0.119	11:15 CDT
AIR BLANK	0.000	11:16 CDT

*Larry Jordan*

OPERATOR

TEST 002

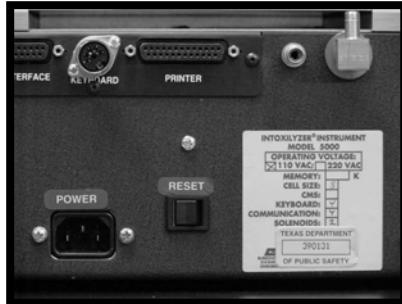
## VALID SUBJECT TEST

TEST 002 was printed on this Test Record because the data entered for this subject's last name, first name, middle initial, and date of birth was identical to the previous test. This type of test numbering will occur if the subsequent test data is entered either automatically by reusing the previously entered data or manually by reentering the data.

## RESET SWITCH

The RESET switch is located on the back panel of the instrument. This rocker switch may be used if the display on the instrument stops scrolling or the instrument will not proceed to the next step. When this rocker switch is activated **NOT READY** will appear on the **display**. The instrument should then conduct a circuitry check and return to the scrolling mode. After the circuitry check the display should begin scrolling and the START TEST switch may be pressed to begin a new test. If the condition persists, contact your Technical Supervisor.

**RESET  
Switch for  
Intoxilyzer  
5000-68**



**RESET  
Switch for  
Intoxilyzer  
5000-68 EN**



## PRINTER

One of the requirements for a properly completed test is that the Test Record must be clearly printed. To increase the likelihood of a clearly printed Test Record, the operator should check to be sure that the printer is turned on and has a supply of paper before beginning a test.

**PRINTER OFFLINE** If the Intoxilyzer 5000 displays **PRINTER OFFLINE**, the operator should attempt the following steps:

- ◆ Check the printer paper supply; add more if necessary. It is recommended that the operator first remove all of the paper from the printer, add more paper to the removed paper, then reload paper into the printer. The message **PRINTER OFFLINE** should disappear and the instrument should complete the printing process.
- ◆ Check for paper jams in the printer. The operator should first unload the paper from the printer. Next, remove any paper jams. Close the printer and reload it with paper. The message **PRINTER OFFLINE** should disappear and the instrument should complete the printing process.
- ◆ Reset the printer by powering off; wait a moment, then power back on. If the printer does not have an ON/OFF switch, the operator will need to unplug the printer power cord. Reprint the Test Record.

**REPRINTING A TEST RECORD** - To reprint a Test Record enter Alt P while the display is scrolling. The Intoxilyzer 5000-68 will immediately reprint the previous test. The Intoxilyzer 5000-68 EN will display the query **TEST RECORD NO=**. The operator may enter the desired Test Record number of the test to be reprinted or press ENTER and the last Test



Record number will be automatically displayed. The operator may edit the displayed number. When ENTER is pressed again the Intoxilyzer 5000-68 EN will print the selected Test Record.

If the **PRINTER OFFLINE** message remains on the **display**, the operator should contact the Technical Supervisor.

PAPER NOT FEEDING - Make sure that there is paper in the printer. If there is paper in the printer:

- (1) remove all of the paper from the printer,
- (2) take out some of the paper from the stack of paper removed from the printer,
- (3) place the remaining paper back into the printer, and
- (4) **avoid overloading the printer with paper.**
- (5) If this does not fix the problem, contact your Technical Supervisor.

PRINT FADED OR STREAKED - If the print appears faded, streaked, or illegible:

- If the printer is an ink jet (DeskJet) printer, replace the printer cartridge.
- If the printer is a laser printer, remove the cartridge, shake it, and place the cartridge back into the printer.
- If the printer is a laser printer and the problem persists, replace the cartridge.
- If this does not fix the problem, contact your Technical Supervisor.



**LASER PRINTER**



**DESKJET PRINTER**

# TEXAS BREATH ALCOHOL TESTING REGULATIONS



**TEXAS DEPARTMENT OF PUBLIC SAFETY  
AUSTIN, TEXAS**

## **STATUTORY AUTHORITY**

Chapter 724, Section 724.016 of the Texas Transportation Code provides that analysis of the breath specimen must be performed according to rules of the Texas Department of Public Safety and by an individual possessing a valid certificate issued by the Texas Department of Public Safety for this purpose. The Texas Department of Public Safety is authorized to establish rules approving satisfactory techniques or methods, to ascertain the qualifications and competence of individuals to conduct such analysis and to issue certificates certifying such fact. These certificates shall be subject to termination or revocation, for cause, at the discretion of the Texas Department of Public Safety.

In order to carry out the provisions as quoted, the Texas Department of Public Safety promulgates the following regulations for individuals, breath testing instruments, techniques and courses of training. The Department has created the Office of the Scientific Director, Breath Alcohol Testing Program, as the responsible officer to administer these regulations and qualifications. The Scientific Director will hold at least a bachelor's degree with a major in chemistry, or as an alternative a major in another scientific field with a minor in chemistry and, in addition, specialized knowledge in the field of alcohol testing.

**Texas Administrative Code**  
**Title 37 Public Safety and Corrections**  
**Part 1 Texas Department of Public Safety**  
**Chapter 19 Breath Alcohol Testing Regulations**  
**Subchapter A Breath Alcohol Testing Regulations**

**§RULE 19.1 DEFINITIONS**

The following words and phrases, when used in this chapter, shall have the following meanings, unless the context shall clearly indicate otherwise.

- (1) Alcohol--Ethyl alcohol, sometimes referred to as grain alcohol or ethanol.
- (2) Approval--Meeting and maintaining the requirements set forth in this title for approval.
- (3) Approved breath alcohol testing program--A breath alcohol testing program meeting and maintaining the provisions stated in §19.4 of this title (relating to Approval of Techniques, Methods, and Programs).
- (4) Approved course of instruction--A school, college, agency, institution, or laboratory meeting the requirements stated in §19.7 of this title (relating to Approval of Courses of Instruction).
- (5) Breath alcohol test (breath alcohol analysis)--The analysis of a subject's breath specimen(s) to determine the alcohol concentration(s) thereof.
- (6) Certification--Meeting and maintaining the requirements set forth in this title for certification.
- (7) Certified operator--An individual meeting and maintaining the requirements stated in §19.5 of this title (relating to Operator Certification).
- (8) Conviction--An adjudicated verdict of guilty or an order of deferred adjudication by a court of competent jurisdiction.
- (9) Department--The unmodified word "department" in this title refers to the Texas Department of Public Safety.
- (10) Inactivation--The voluntary or temporary discontinuance of certification.
- (11) Instrument (s)--The device(s) which measure or quantitate the breath alcohol concentration pursuant to §19.2 of this title (relating to Instrument Certification).
- (12) Office of the Scientific Director (OSD)--The scientific director and his staff.
- (13) Predicted value--The known value of the reference sample.
- (14) Proficiency test--A test administered at the direction of a technical supervisor or designated representative of the Scientific Director to establish and/or ascertain the competency of an operator to obtain valid results on breath test instruments.
- (15) Public information and demonstration--The public display and exhibition of certified evidential breath testing equipment.
- (16) Recertification--A process to make certification current.
- (17) Reference Sample Device--An apparatus or device designed to provide a reference sample or analytical test standard.
- (18) Renewal of current certification--The continuance of active certification by meeting the requirements stated in §19.5(b) of this title (relating to Operator Certification).

- (19) Reports and records--The data and documents pertinent to this title.
- (20) Scientific Director--The individual responsible for the implementation, administration and enforcement of the Texas breath alcohol testing regulations.
- (21) Security--The safeguard of certified instruments at testing locations.
- (22) Site location--The physical site of the breath alcohol testing instrument and reference sample device.
- (23) Suspension--The termination or revocation of certification.
- (24) System blank analysis--An analysis of ambient air, free of alcohol and other interfering substances, that yields a result of 0.000.
- (25) Technical Supervisor and technical supervision--An individual meeting the minimum requirements set forth in §19.6 of this title (relating to Technical Supervisor Certification) and the responsibilities of such.

## **§RULE 19.2 INSTRUMENT CERTIFICATION**

(a) The Office of the Scientific Director, Alcohol Testing Program, Texas Department of Public Safety (hereinafter referred to as the scientific director) shall approve and certify all breath test instruments to be used for evidential purposes.

(1) The scientific director will establish and maintain a list of approved instruments by manufacturer brand or model designation for use in the state.

(2) A manufacturer or designated representative desiring approval of an instrument not on the approved list may submit to the scientific director a production model of the instrument. Examination and evaluation of the instrument to determine if it meets the criteria for approval or certification as an evidential instrument will be done at the discretion of the scientific director. All shipping costs associated with such submission will be done at the expense of the submitting entity.

(b) In order to be approved each instrument must meet the following criteria:

(1) Breath specimens collected for analysis shall be essentially alveolar in composition.

(2) The instrument shall analyze a reference sample or analytical test standard the result of which must agree within plus or minus 0.01g/210L of the predicted value or such limits as set by the scientific director.

(3) The specificity of the procedure shall be adequate and appropriate for the analyses of breath specimens for the determination of alcohol concentration for law enforcement.

(4) Any other tests deemed necessary by the scientific director to correctly and adequately evaluate the instrument to give correct results in routine breath alcohol testing and be practical and reliable for law enforcement purposes.

(c) Upon proof of compliance with subsection (b) of this section the instrument will be placed on the list of approved instruments.

(1) Inclusion on the scientific director's list of approved instruments will verify that the instrument by manufacturer brand or model designation meets subsection (b) of this section.

(2) The scientific director may, for cause, rescind approval of and remove an instrument by manufacturer brand or model designation from the approved list.

(d) The technical supervisor shall determine if a specific instrument by serial number is of the same manufacturer brand or model designation as is shown on the scientific director's approved list and meets the criteria for certification as stated in subsection (b)(2) of this section and when required, shall provide direct testimony or written affidavit of this information.

(e) The scientific director, or a designated representative or technical supervisor, may, for cause, remove a specific instrument by serial number from evidential testing and withdraw certification thereof.

### **§RULE 19.3 APPROVAL OF REFERENCE SAMPLE DEVICES**

(a) All reference sample devices used in conjunction with evidential breath alcohol testing must be approved by the scientific director.

(1) The scientific director will establish and maintain a list of approved reference sample devices by type, manufacturer brand or model designation for use in the state.

(2) A manufacturer or designated representative desiring approval of a reference sample device not on the approved list may submit to the scientific director a production model of the device. Examination and evaluation of the device to determine if it meets the criteria for approval will be done at the discretion of the scientific director. All shipping costs associated with such submissions will be at the expense of the submitting entity.

(b) In order to be approved, a reference sample device must function properly for the purpose for which it was designed and be compatible with the certified instrumentation.

(c) Upon proof of compliance with subsection (b) of this section the reference sample device by type, manufacturer brand and/or model designation will be approved and placed on the scientific director's approved list.

(1) Inclusion on the scientific director's list of approved reference sample devices will verify that the equipment by type, brand and/or model meets subsection (b) of this section.

(2) The scientific director may, for cause, rescind the approval of and remove the type, manufacturer brand and/or model designation from the list of approved devices.

(d) The technical supervisor shall determine if a specific reference sample device is of the same type, manufacturer brand and/or model designation as is shown on the scientific director's approved list and meets the criteria for approval as stated in subsection (b) of this section and when required, shall provide direct testimony or written affidavit of this information.

### **§RULE 19.4 APPROVAL OF TECHNIQUES, METHODS AND PROGRAMS**

(a) All breath alcohol testing techniques, methods and programs to be used for evidential purposes must have the approval of the scientific director.

(b) Prior to initiating a breath alcohol testing program, an agency or laboratory shall submit an application to the scientific director for approval. If the scientific director deems it appropriate, an on-site inspection may be made by the scientific director or a designated representative to assure compliance with the provisions of the application. An agency or laboratory applying for approval of a breath alcohol testing program must agree to:

(1) conduct such analyses only for the purposes stated in subsection (c)(8) of this section;

(2) allow access for inspection under subsection (d) of this section; and

(3) comply with subsection (f) of this section.

(c) All breath alcohol testing techniques, in order to be approved, shall meet, but not be limited to, the following:

(1) a period during which an operator is required to remain in the presence of the subject. An operator shall remain in the presence of the subject at least 15 minutes

before the test and should exercise reasonable care to ensure that the subject does not place any substances in the mouth. Direct observation is not necessary to ensure the validity or accuracy of the test result;

(2) the breath alcohol testing instrument and reference sample device must be operated by either a certified operator or technical supervisor and only certified personnel will have access to the instrument;

(3) the use of a system blank analysis in conjunction with the testing of each subject;

(4) the analysis of a reference sample, the results of which must agree with the reference sample predicted value within plus or minus 0.01g/210 L, or such limits as set by the scientific director. This reference analysis shall be performed in conjunction with subject analyses;

(5) all analytical results shall be expressed in grams of alcohol per 210 liters of breath (g/210 L);

(6) maintenance of any specified records designated by the scientific director;

(7) supervision of certified operators and testing techniques by a technical supervisor meeting the qualifications set forth in §19.6 of this title (relating to Technical Supervisor Certification);

(8) designation that the instrumentation will be used only:

(A) for testing subjects that are suspected of violating any statute or rule that defines intoxication in terms of alcohol concentration; and

(B) in compliance with §19.5(b), (c), and (e) of this title (relating to Operator Certification).

(d) The scientific director or a designated representative may at any time make an inspection of the approved breath alcohol testing agency or laboratory to ensure compliance with these regulations.

(e) Upon proof of compliance with subsections (a) - (c) of this section, approval will be granted by the scientific director.

(f) Approval of any breath alcohol testing program is contingent upon the applying agency or laboratory's agreement to conform and abide by any directives, orders, or policies issued or to be issued by the scientific director regarding any aspect of the breath alcohol testing program; this shall include, but not be limited to, the following:

(1) program administration;

(2) reports;

(3) data, records and forms;

(4) site location and security;

(5) certified evidential instruments should not ordinarily be used for public information programs and dissemination of any such information should be carried out by a certified technical supervisor;

(6) methods of operations and testing techniques;

(7) instruments and reference sample devices;

(8) purposes for which testing is conducted;

(9) operators and technical supervision of operators.

(g) Approval of a breath alcohol testing program may be denied or withdrawn by the scientific director if, based on information obtained by the scientific director, a designated representative of the scientific director, or a technical supervisor, the approved agency or laboratory fails to meet all criteria stated in this section.

(h) Technical supervisors, when required, shall provide expert testimony by direct testimony or by written affidavit concerning the approval of techniques, methods and programs under their supervision.

## **§RULE 19.5 OPERATOR CERTIFICATION**

### **(a) Certification.**

(1) Prior to certification an applicant must establish proof of participation in a breath test program meeting the requirements set forth in §19.4 of this title (relating to Approval of Techniques, Methods, and Programs).

#### **(2) Conviction history:**

(A) persons convicted of a felony or a Class A misdemeanor shall not be eligible to be a certified operator;

(B) persons convicted of a Class B misdemeanor within the last ten years shall not be eligible to be a certified operator;

(C) persons receiving a driver license suspension for refusal to submit to a chemical test as per the provisions of Chapter 724 or Chapter 522, Texas Transportation Code within the last ten years shall not be eligible to be a certified operator.

(3) Prior to initial certification as a breath test operator an applicant must successfully complete a course of instruction meeting the criteria set forth in §19.7 of this title (relating to Approval of Courses of Instruction).

(4) Prior to certification as an operator of a breath alcohol testing instrument, an applicant must satisfactorily complete examinations, prepared and given by the scientific director or a designated representative, which shall include the following:

(A) a written examination;

(B) a practical examination establishing proficiency in the operation of the instrument and reference sample device on which the operator is to be certified and the proper completion of all required reports and records. The practical examination will involve the completion of simulated subject analyses and/or practice test (s). If the simulated subject analyses and/or practice tests are not completed correctly and/or there are one or more errors in the reports or records the applicant will be offered a second set of simulated subject analyses. Any error(s) in the second set of analyses will result in a failure of the practical examination;

(C) failure of the written and/or practical examination will cause the applicant to be ineligible for reexamination for a period of 30 days. A subsequent failure will require that the candidate attend and satisfactorily complete the initial course of instruction for certification of a breath testing operator.

(5) Upon successful completion of the requirements for certification, the scientific director will issue the individual an operator certificate valid for a period of time designated by the scientific director or until the next examination for renewal unless inactivated or suspended.

(6) If an operator is certified to operate a specific brand and/or model of equipment and is required to be certified on an additional brand and/or model of equipment, the scientific director may waive portions of this section and require only that instruction needed to acquaint the applicant with proper operation of the new brand and/or model of equipment.

**(b) Renewal of current certification.** In order to maintain current certification, the operator is required to renew certification prior to its expiration date. The minimum requirement for renewal of operator certification will be:

(1) A practical examination in accordance to subsection (a)(4)(B) of this section establishing proficiency of the operator in the operation of the instrument and reference



sample device on which the operator is certified and the proper completion of all required reports and records. The operator will be evaluated on the basis of ability to:

(A) use proper techniques;

(B) follow established procedures including, but not limited to, the operation of the instrument and reference sample device and the proper reporting procedures for analysis results;

(2) The satisfactory biennial completion of a course of instruction, the contents of which should include, but not be limited to, topics such as:

(A) a brief review of the theory and operation of the breath alcohol test equipment;

(B) a detailed review of the breath alcohol analysis and reporting procedures;

(C) a discussion of procedural updates resulting from recent court decisions and legislation;

(D) a discussion of current issues in the field of breath alcohol testing;

(E) a written examination

(3) Renewal of certification will be denied and current certification will be inactivated in accordance with subsection (d) of this section when the operator:

(A) fails to follow established procedures;

(B) uses other than proper technique;

(C) fails the practical examination; or

(D) fails the written examination.

(4) An operator who fails renewal will be given the reason for failure and is not eligible to be reexamined for a period of 30 days. Reexamination will be pursuant to subsection (a)(4) of this section. A resulting failure will require that the operator attend and satisfactorily complete the initial course of instruction for certification of a breath test operator in order to regain current certification.

(5) Upon successful completion of the requirements for renewal of certification, the scientific director will issue the individual an operator's certificate valid for a period of time designated by the scientific director or until next renewal unless inactivated or suspended.

(c) Proficiency requirements.

(1) The scientific director or a designated representative or the operator's technical supervisor may at any time require an operator to demonstrate proficiency and ability to properly operate the instrument and reference sample device.

(2) It is the responsibility of the individual operator to maintain proficiency.

(3) Failure to pass a proficiency test will result in the suspension of the operator's certification for 30 days.

(d) Certification inactivation and suspension.

(1) Inactivation may be initiated by the certified operator in case of voluntary surrender of certification or by anyone having authority to suspend. The technical supervisor or operator shall, without delay, notify the office of the scientific director of any such inactivation. Challenges to involuntary inactivation will be resolved at the discretion of the scientific director. Inactivation will be utilized in, but not limited to the following situations:

(A) an operator transfers to a position where certification as a breath test operator is no longer desired;

(B) an operator fails to renew certification prior to its expiration;

(C) an operator terminates employment under which certification was acquired;

(D) administrative program control to safeguard the scientific integrity of the breath alcohol testing program.

(2) Suspension of certification will be utilized when the scientific director and/or a technical supervisor determines an operator intentionally or purposefully disregards or violates these regulations, or commits a violation of law relating to breath testing, or falsely or deceitfully obtains certification, or for malfeasance or noncompliance with any provision of these regulations, or when in the technical supervisor's judgment the operator's performance is unreliable or the operator is incompetent.

(A) The technical supervisor shall, without delay, notify the scientific director in writing of any such suspension and furnish a copy of such notice to the suspended operator and the operator's appropriate supervisor or department head. The suspended operator shall not be permitted to operate the instrument until such time as certification has been restored pursuant to subsection (e) of this section.

(B) Upon receipt of the notification of suspension, the scientific director shall initiate, if not previously completed, an inquiry culminating in sustaining the suspension, or setting aside the suspension.

(C) The minimum period of suspension as determined by the scientific director will be for a period of time not less than 30 days. The technical supervisor or a designated representative of the scientific director may recommend a specific period of suspension to the scientific director.

(D) Due to the immediate nature and the procedure for appeal, the individual initiating the suspension shall not be required to confer, consult, or obtain permission or approval from anyone prior to the initiation of the suspension. However, all suspensions must be consistent with procedures outlined in this title.

(3) An operator whose certification has been suspended may appeal such action in writing to the director, Texas Department of Public Safety, who will determine if the action of the scientific director will be affirmed or set aside. The director may reinstate the certification under such conditions as deemed necessary and notify the scientific director in writing.

(e) Recertification.

(1) Certification that has been inactivated or suspended must be regained before evidential analyses may be administered. It will be the responsibility of the inactivated or suspended operator to notify the scientific director in writing of such intent. Recertification shall take place pursuant to the following:

(A) recertification after inactivation for the failure to complete the renewal process prior to the expiration of current certification will be pursuant to subsection (a)(4) of this section;

(B) recertification after inactivation or suspension will be pursuant to subsection (a)(4) of this section;

(C) recertification after an inactivation or suspension period of greater than five years the operator must attend and satisfactorily complete the initial course of instruction for certification of a breath test operator pursuant to subsection (a) of this section.

(D) recertification after a change in instrumentation or testing methodologies will be at the discretion of the scientific director, pursuant to subsection (a)(6) of this section.

(f) Certificate. The issuance of a certificate to the breath test operator shall be evidence that the operator has met the requirements for initial certification and/or renewal of certification.

(g) Verification. The technical supervisor, when required, shall provide direct testimony or by written affidavit verifying all aspects of certification of operators within an assigned area.

## **§RULE 19.6 TECHNICAL SUPERVISOR CERTIFICATION**

(a) The primary function of the technical supervisor is to provide the technical, administrative and supervisory expertise in safeguarding the scientific integrity of the breath alcohol testing program and to assure the breath alcohol testing program's acceptability for evidential purposes. The technical supervisor, in matters pertaining to breath alcohol testing, is the field agent of the scientific director. Supervision by the technical supervisor in accordance with the provisions stated in these regulations shall include, but not be limited to:

(1) supervision of certified operators in performance of breath alcohol test operations, including the proper completion of forms and records and operator's compliance with the provisions stated in these regulations;

(2) supervision of certified instrumentation, reference sample devices and affiliated equipment in an assigned area;

(3) supervision of data gathered for initial certification and/or approval of individual instruments and reference sample devices in an assigned area;

(4) supervision of techniques of testing, maintaining scientific integrity and upholding these regulations as they apply to the certification of a total testing program;

(5) selection and supervision of a site location as it applies to security and technical suitability for testing;

(6) supervision of compliance with the policy of public information and/or demonstrations of breath alcohol testing instruments and equipment;

(7) all technical, administrative and regulatory aspects of breath alcohol testing within a designated area; and

(8) expert testimony by direct testimony or by written affidavit concerning all aspects of breath alcohol testing within an assigned area.

(b) The minimum qualifications for certification as a technical supervisor are:

(1) a baccalaureate degree from an accredited college or university with a major in chemistry, or as an alternative, a major in another scientific field with sufficient semester hours in chemistry or other qualifications as determined by the scientific director (For the purposes of these regulations, sufficient hours in chemistry shall be defined as successful completion of the equivalent of a minimum of 18 semester hours of chemistry, no more than 8 of which may be freshman level.);

(2) satisfactory completion of a course of instruction as set forth in §19.5(a)(3) of this title (relating to Operator Certification);

(3) satisfactory completion of technical supervisor training that is approved by the scientific director, the content of which shall include, but not be limited to:

(A) advanced survey of current information concerning alcohol and its effects on the human body;

(B) operational principles and theories applicable to the program;

(C) instrument operations, maintenance, repair and calibration;

(D) legal aspects of breath alcohol analysis;

(E) principles of instruction;

(4) knowledge and understanding of the scientific theory and principles as to the operation of the instrument and reference sample device;

(5) prior to receiving certification, a technical supervisor candidate must establish proof of engagement in an approved program or a certified school of instruction or proof of pending engagement upon receipt of certification. If the technical supervisor candidate or certified technical supervisor cannot establish proof of being actively engaged in an approved program or approved school of instruction, certification will, at the discretion of the scientific director, be denied or inactivated;

(6) Conviction history:

(A) persons convicted of a felony or a Class A misdemeanor shall not be eligible to be a certified technical supervisor;

(B) persons convicted of a Class B misdemeanor within the last ten years shall not be eligible to be a certified technical supervisor;

(C) persons receiving a driver license suspension for refusal to submit to a chemical test as per the provisions of Chapter 724 or Chapter 522, Texas Transportation Code, within the last ten years shall not be eligible to be a certified technical supervisor.

(c) Certification.

(1) Upon satisfactory proof to the scientific director by the applicant that the minimum qualifications set forth in subsection (b) of this section has been met, the scientific director will issue certification that will be valid for a period of time designated by the scientific director unless inactivated or suspended.

(2) Technical supervisor certification may be voluntarily inactivated when it is no longer needed or inactivated at the discretion of the scientific director if the technical supervisor is no longer actively engaged in an approved program or certified school of instruction.

(3) Technical supervisor certification may be suspended only by the scientific director for malfeasance, falsely or deceitfully obtaining certification or failure to carry out the responsibilities set forth in this title.

(4) A technical supervisor whose certification has been suspended may appeal such action in writing to the director, Texas Department of Public Safety, who will decide whether the action of the scientific director will be affirmed or set aside. The director may reinstate certification of the technical supervisor making such appeal under such conditions deemed necessary and notify the scientific director in writing.

(d) Certificate. The issuance of a certificate to the technical supervisor shall be evidence that the technical supervisor has met the requirements for certification.

(e) Renewal of current certification and recertification. In order to maintain current certification, the Technical Supervisor is required to renew certification prior to its expiration. The scientific director shall determine the minimum requirement for renewal of technical supervisor certification and for recertification after inactivation or suspension.

## **§RULE 19.7 APPROVAL OF COURSES OF INSTRUCTION**

(a) Any agency, laboratory, institution, school or college intending to offer a course of instruction for certified operators of evidential breath alcohol testing instruments, must have the course curriculum approved by the scientific director.

(b) The operator course must utilize the most current revision of the Texas Breath Alcohol Testing Program Operator Manual as the primary instructional text and contain, as a minimum, the following hours and areas of instruction:

(1) three hours of instruction on the effects of alcohol on the human body;

- (2) three hours of instruction on the operational principles of the breath alcohol testing instrument to be used. This instruction shall include:
- (A) a functional description of the testing method; and
  - (B) a detailed operational description of the method with demonstrations;
- (3) five hours of instruction on Texas legal aspects of breath alcohol testing;
- (4) three hours of instruction on supplemental information which is to include nomenclature appropriate to the field of breath alcohol testing;
- (5) 10 hours of participation in a laboratory setting operating the breath testing equipment. Laboratory practice will include the analysis of reference samples, as well as the analysis of breath samples from actual drinking subjects and completion of all required records and reports needed for documentation;
- (6) examination time (approximately three hours) which will be considered part of the course.
- (c) Each course of instruction shall be coordinated by or under the general direction or supervision of a certified technical supervisor.
- (d) All courses of instruction will be open to the scientific director or designated representative for inspection thereof.
- (e) Upon satisfactory proof of compliance of subsections (a) - (d) of this section to the scientific director, the scientific director will approve the course of instruction and its participants will be eligible to apply for operator certification.
- (f) Prior to commencing the course it will be the responsibility of the teaching agency to make arrangements with the office of the scientific director for the administration of examinations.
- (g) Prior to the administration of the examination by the scientific director, it shall be the responsibility of the course of instruction coordinator(s) to provide proof that all students attending the course of instruction have been authorized and approved by the technical supervisor responsible for the technical supervision of the operator upon certification. Failure to provide this authorization will delay the administration of the examination and/or certification until such time as proof of authorization can be documented.
- (h) Examinations for operator certification after completion of a course will be in accordance with §19.5(a)(4) of this title (relating to Operator Certification).
- (i) Failure to maintain the provisions stated in this section will be cause for the scientific director to rescind approval of a course of instruction.

## **§RULE 19.8 REVISIONS**

The changes which are adopted with the revision of these regulations apply only to breath tests that are done after the date of this revision. Previous revisions of these regulations are not nullified and nothing herein should be construed as limiting or canceling the effect of old regulations on tests done under these previous regulations.

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# LEGAL

## PENAL CODE

### CHAPTER 49: INTOXICATION AND ALCOHOLIC BEVERAGE OFFENSES

#### § 49.01. Definitions

In this chapter:

- (1) "Alcohol concentration" means the number of grams of alcohol per:
  - (A) 210 liters of breath;
  - (B) 100 milliliters of blood; or
  - (C) 67 milliliters of urine.
- (2) "Intoxicated" means:
  - (A) not having the normal use of mental or physical faculties by reason of the introduction of alcohol, a controlled substance, a drug, a dangerous drug, a combination of two or more of those substances, or any other substance into the body; or
  - (B) having an alcohol concentration of 0.08 or more.
- (3) "Motor vehicle" has the meaning assigned by Section 32.34(a).
- (4) "Watercraft" means a vessel, one or more water skis, an aquaplane, or another device used for transporting or carrying a person on water, other than a device propelled only by the current of water.
- (5) "Amusement ride" has the meaning assigned by Section 2, Article 21.60, Insurance Code.<sup>1</sup>

#### § 49.02. Public Intoxication

- (a) A person commits an offense if the person appears in a public place while intoxicated to the degree that the person may endanger the person or another.
- (b) It is a defense to prosecution under this section that the alcohol or other substance was administered for therapeutic purposes and as a part of the person's professional medical treatment by a licensed physician.
- (c) Except as provided by Subsection (e), an offense under this section is a Class C misdemeanor.

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<sup>1</sup> Now Tex. Occupations Code Ann. § 151.002.

- (d) An offense under this section is not a lesser included offense under Section 49.04.
- (e) An offense under this section committed by a person younger than 21 years of age is punishable in the same manner as if the minor committed an offense to which Section 106.071, Alcoholic Beverage Code, applies.

**§ 49.031. Possession of Alcoholic Beverage in Motor Vehicle**

- (a) In this section:
  - (1) “Open container” means a bottle, can, or other receptacle that contains any amount of alcoholic beverage and that is open, that has been opened, that has a broken seal, or the contents of which are partially removed.
  - (2) “Passenger area of a motor vehicle” means the area of a motor vehicle designed for the seating of the operator and passengers of the vehicle. The term does not include:
    - (A) a glove compartment or similar storage container that is locked;
    - (B) the trunk of the vehicle; or
    - (C) the area behind the last upright seat of the vehicle, if the vehicle does not have a trunk.
  - (3) “Public highway” means the entire width between and immediately adjacent to the boundary lines of any public road, street, highway, interstate, or other publicly maintained way if any part is open for public use for the purpose of motor vehicle travel. The term includes the right-of-way of a public highway.
- (b) A person commits an offense if the person knowingly possesses an open container in a passenger area of a motor vehicle that is located on a public highway, regardless of whether the vehicle is being operated or is stopped or parked. Possession by a person of one or more open containers in a single criminal episode is a single offense.
- (c) It is an exception to the application of Subsection (b) that at the time of the offense the defendant was a passenger in:
  - (1) the passenger area of a motor vehicle designed, maintained, or used primarily for the transportation of persons for compensation, including a bus, taxicab, or limousine; or
  - (2) the living quarters of a motorized house coach or motorized house trailer, including a self-contained camper, a motor home, or a recreational vehicle.
- (d) An offense under this section is a Class C misdemeanor.



- (e) A peace officer charging a person with an offense under this section, instead of taking the person before a magistrate, shall issue to the person a written citation and notice to appear that contains the time and place the person must appear before a magistrate, the name and address of the person charged, and the offense charged. If the person makes a written promise to appear before the magistrate by signing in duplicate the citation and notice to appear issued by the officer, the officer shall release the person.

#### **§ 49.04. Driving While Intoxicated**

- (a) A person commits an offense if the person is intoxicated while operating a motor vehicle in a public place.
- (b) Except as provided by Subsection (c) and Section 49.09, an offense under this section is a Class B misdemeanor, with a minimum term of confinement of 72 hours.
- (c) If it is shown on the trial of an offense under this section that at the time of the offense the person operating the motor vehicle had an open container of alcohol in the person's immediate possession, the offense is a Class B misdemeanor, with a minimum term of confinement of six days.

#### **§ 49.045. Driving While Intoxicated with Child Passenger**

- (a) A person commits an offense if:
  - (1) the person is intoxicated while operating a motor vehicle in a public place; and
  - (2) the vehicle being operated by the person is occupied by a passenger who is younger than 15 years of age.
- (b) An offense under this section is a state jail felony.

#### **§ 49.05. Flying While Intoxicated**

- (a) A person commits an offense if the person is intoxicated while operating an aircraft.
- (b) Except as provided by Section 49.09, an offense under this section is a Class B misdemeanor, with a minimum term of confinement of 72 hours.

#### **§ 49.06. Boating While Intoxicated**

- (a) A person commits an offense if the person is intoxicated while operating a watercraft.
- (b) Except as provided by Section 49.09, an offense under this section is a Class B misdemeanor, with a minimum term of confinement of 72 hours.

#### **§ 49.065. Assembling or Operating an Amusement Ride While Intoxicated**

- (a) A person commits an offense if the person is intoxicated while operating an amusement ride or while assembling a mobile amusement ride.

- (b) Except as provided by Subsection (c) and Section 49.09, an offense under this section is a Class B misdemeanor with a minimum term of confinement of 72 hours.
- (c) If it is shown on the trial of an offense under this section that at the time of the offense the person operating the amusement ride or assembling the mobile amusement ride had an open container of alcohol in the person's immediate possession, the offense is a Class B misdemeanor with a minimum term of confinement of six days.

#### **§ 49.07. Intoxication Assault**

- (a) A person commits an offense if the person, by accident or mistake:
  - (1) while operating an aircraft, watercraft, or amusement ride while intoxicated, or while operating a motor vehicle in a public place while intoxicated, by reason of that intoxication causes serious bodily injury to another; or
  - (2) as a result of assembling a mobile amusement ride while intoxicated causes serious bodily injury to another.
- (b) In this section, "serious bodily injury" means injury that creates a substantial risk of death or that causes serious permanent disfigurement or protracted loss or impairment of the function of any bodily member or organ.
- (c) An offense under this section is a felony of the third degree.

#### **§ 49.08. Intoxication Manslaughter**

- (a) A person commits an offense if the person:
  - (1) operates a motor vehicle in a public place, operates an aircraft, a watercraft, or an amusement ride, or assembles a mobile amusement ride; and
  - (2) is intoxicated and by reason of that intoxication causes the death of another by accident or mistake.
- (b) An offense under this section is a felony of the second degree.

#### **§ 49.09. Enhanced Offenses and Penalties**

- (a) Except as provided by Subsection (b), an offense under Section 49.04, 49.05, 49.06, or 49.065 is a Class A misdemeanor, with a minimum term of confinement of 30 days, if it is shown on the trial of the offense that the person has previously been convicted one time of an offense relating to the operating of a motor vehicle while intoxicated, an offense of operating an aircraft while intoxicated, an offense of operating a watercraft while intoxicated, or an offense of operating or assembling an amusement ride while intoxicated.
- (b) An offense under Section 49.04, 49.05, 49.06, or 49.065 is a felony of the third degree if it is shown on the trial of the offense that the person has previously been convicted:

- (1) one time of an offense under Section 49.08 or an offense under the laws of another state if the offense contains elements that are substantially similar to the elements of an offense under Section 49.08; or
  - (2) two times of any other offense relating to the operating of a motor vehicle while intoxicated, operating an aircraft while intoxicated, operating a watercraft while intoxicated, or operating or assembling an amusement ride while intoxicated.
- (c) For the purposes of this section:
- (1) Offense relating to the operating of a motor vehicle while intoxicated” means:
    - (A) an offense under Section 49.04 or 49.045;
    - (B) an offense under Section 49.07 or 49.08, if the vehicle operated was a motor vehicle;
    - (C) an offense under Article 6701ℓ-1, Revised Statutes, as that law existed before September 1, 1994;
    - (D) an offense under Article 6701ℓ-2, Revised Statutes, as that law existed before January 1, 1984;
    - (E) an offense under Section 19.05(a)(2), as that law existed before September 1, 1994, if the vehicle operated was a motor vehicle; or
    - (F) an offense under the laws of another state that prohibit the operation of a motor vehicle while intoxicated.
  - (2) “Offense of operating an aircraft while intoxicated” means:
    - (A) an offense under Section 49.05;
    - (B) an offense under Section 49.07 or 49.08, if the vehicle operated was an aircraft;
    - (C) an offense under Section 1, Chapter 46, Acts of the 58<sup>th</sup> Legislature, Regular Session, 1963 (Article 46f-3, Vernon’s Texas Civil Statutes), as that law existed before September 1, 1994;
    - (D) an offense under Section 19.05(a)(2), as that law existed before September 1, 1994, if the vehicle operated was an aircraft; or
    - (E) an offense under the laws of another state that prohibit the operation of an aircraft while intoxicated.
  - (3) “Offense of operating a watercraft while intoxicated” means:

- (A) an offense under Section 49.06;
  - (B) an offense under Section 49.07 or 49.08, if the vehicle operated was a watercraft;
  - (C) an offense under Section 31.097, Parks and Wildlife Code, as that law existed before September 1, 1994;
  - (D) an offense under Section 19.05(a)(2), as that law existed before September 1, 1994, if the vehicle operated was a watercraft; or
  - (E) an offense under the laws of another state that prohibits the operation of a watercraft while intoxicated.
- (4) "Offense of operating or assembling an amusement ride while intoxicated" means:
- (A) an offense under Section 49.065;
  - (B) an offense under Section 49.07 or 49.08, if the offense involved the operation or assembly of an amusement ride; or
  - (C) an offense under the law of another state that prohibits the operation of an amusement ride while intoxicated or the assembly of a mobile amusement ride while intoxicated.
- (d) For the purposes of this section, a conviction for an offense under Section 49.04, 49.05, 49.06, 49.065, 49.07, or 49.08 that occurs on or after September 1, 1994, is a final conviction, whether the sentence for the conviction is imposed or probated.
- (e) Except as provided by Subsection (f), a conviction may not be used for purposes of enhancement under this section if:
- (1) the conviction was a final conviction under Subsection (d);
  - (2) the offense for which the person is being tried was committed more than 10 years after the latest of:
    - (A) the date on which the judgment was entered for the previous conviction;
    - (B) the date on which the person was discharged from any period of community supervision on which the person was placed for the previous conviction;
    - (C) the date on which the person successfully completed any period of parole on which the person was released after serving a portion of the term to which the person was sentenced for the previous conviction; or

- (D) the date on which the person completed serving any term for which the person was confined or imprisoned for the previous conviction; and
- (3) the person has not been convicted of an offense under section 49.04, 49.05, 49.06, 49.065, 49.07, or 49.08 or any offense related to operating a motor vehicle while intoxicated within 10 years of the latest date under Subdivision (2).
- (f) A conviction may be used for the purposes of enhancement under this section regardless of when the conviction occurred if the conviction was for an offense under:
  - (1) Section 49.08 involving the operation of a motor vehicle; or
  - (2) Section 19.05(a)(2), as that law existed before September 1, 1994, involving the operation of a motor vehicle.
- (g) A conviction may be used for purposes of enhancement under this section or enhancement under Subchapter D, Chapter 12, but not under both this section and Subchapter D.
- (g)<sup>2</sup> This subsection applies only to a person convicted of a second or subsequent offense relating to the operating of a motor vehicle while intoxicated committed within five years of the date on which the most recent preceding offense was committed. The court shall enter an order that requires the defendant to have a device installed, on each motor vehicle owned or operated by the defendant, that uses a deep-lung breath analysis mechanism to make impractical the operation of the motor vehicle if ethyl alcohol is detected in the breath of the operator, and that requires that before the first anniversary of the ending date of the period of license suspension Under Section 421.344, Transportation Code, the defendant not operate any motor vehicle that is not equipped with that device. The court shall require the defendant to obtain the device at the defendant's own cost on or before that ending date, require the defendant to provide evidence to the court on or before that ending date that the device has been installed on each appropriate vehicle, and order the device to remain installed on each vehicle until the first anniversary of that ending date. If the court determines the offender is unable to pay for the device, the court may impose a reasonable payment schedule not to extend beyond the first anniversary of the date of installation. The Department of Public Safety shall approve

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<sup>2</sup> HB 5 and HB 2250 both contain a subsection (g). HB 2250 renumbered former subsection (f) as (g). However HB 5, the open container bill, added a new subsection (g). The content of the two subsections is different, and courts will try to give effect to both versions by reconciling the differences. HB 5 also makes changes to Transportation Code ch. 521 and Code of Criminal Procedure art. 42.12. The bill also repealed Penal Code § 49.03.

devices for use under this subsection. Section 521.247, Transportation Code, applies to the approval of a device under this subsection and the consequences of that approval. Failure to comply with an order entered under this subsection is punishable by contempt. For the purpose of enforcing this subsection, the court that enters an order under this subsection retains jurisdiction over the defendant until the date on which the device is no longer required to remain installed. To the extent of a conflict between this subsection and Section 13(l), Article 42.12, Code of Criminal Procedure, this subsection controls.

#### **§ 49.10. No Defense**

In a prosecution under Section 49.03, 49.04, 49.045, 49.05, 49.06, 49.065, 49.07, or 49.08, the fact that the defendant is or has been entitled to use the alcohol, controlled substance, drug, dangerous drug, or other substance is not a defense.

#### **§ 49.11. Proof of Mental State Unnecessary**

- (a) Notwithstanding Section 6.02(b), proof of a culpable mental state is not required for conviction of an offense under this chapter.
- (b) Subsection (a) does not apply to an offense under Section 49.031.

## **TRANSPORTATION CODE**

### **CHAPTER 522 (selected sections)**

#### **§ 522.101. Driving While Having Alcohol in System Prohibited**

- (a) Notwithstanding any other law of this state, a person may not drive a commercial motor vehicle in this state while having a measurable or detectable amount of alcohol in the person's system.
- (b) A person who violates Subsection (a) or who refuses to submit to an alcohol test under Section 522.102 shall be placed out of service for 24 hours.
- (c) A peace officer may issue an out-of-service order based on probable cause that the person has violated this section. The order must be on a form approved by the department. The peace officer shall submit the order to the department.

#### **§ 522.102. Implied Consent to Taking of Specimen**

- (a) A person who drives a commercial motor vehicle in this state is considered to have consented, subject to Chapter 724, to the taking of one or more specimens of the person's breath, blood, or urine for the purpose of analysis to determine the person's alcohol concentration or the presence in the person's body of a controlled substance or drug.
- (b) Notwithstanding Chapter 724, one or more specimens may be taken at the request of a peace officer who, after stopping or detaining a person driving a

- (c) commercial motor vehicle, has probable cause to believe that the person was driving the vehicle while having alcohol, a controlled substance, or a drug in the person's system.
- (d) This section and Section 522.103 apply only to a person who is stopped or detained while driving a commercial motor vehicle.

**§ 522.103. Warning by Peace Officer**

- (a) A peace officer requesting a person to submit a specimen under Section 522.102 shall warn the person that a refusal to submit a specimen will result in the person's being immediately placed out of service for 24 hours and being disqualified from driving a commercial motor vehicle for at least one year under Section 522.081.
- (b) A peace officer requesting a person to submit a specimen under Section 522.102 is not required to comply with Section 724.015.

**§ 522.104. Submission of Report to Department**

If a person driving a commercial motor vehicle refuses to give a specimen or submits a specimen that discloses an alcohol concentration of 0.04 or more, the peace officer shall submit to the department a sworn report, on a form approved by the department, certifying that the specimen was requested under Section 522.102 and that the person refused to submit a specimen or submitted a specimen that disclosed an alcohol concentration of 0.04 or more.

**§ 522.106. Affidavit by Certified Breath Test Technical Supervisor**

- (a) In a proceeding under this chapter, the certified breath test technical supervisor responsible for maintaining and directing the operation of the breath test instruments in compliance with department rules, in lieu of appearing in court, may attest by affidavit to:
  - (1) the reliability of the instrument used to take or analyze a specimen of a person's breath to determine alcohol concentration; and
  - (2) the validity of the results of the analysis.
- (b) An affidavit submitted under this section must contain statements regarding:
  - (1) the reliability of the instrument and the analytical results; and
  - (2) compliance with state law in the administration of the program.
- (c) A certified copy of an affidavit prepared in accordance with this section is admissible only if the department serves a copy of the affidavit on the person or the person's attorney not later than the seventh day before the date on which the hearing begins.

## **CHAPTER 524 (selected sections)**

### **§ 524.001. Definitions**

In this chapter:

- (1) “Adult” means an individual 21 years of age or older.
- (2) “Alcohol concentration” has the meaning assigned by Section 49.01, Penal Code.
- (3) “Alcohol-related or drug-related enforcement contact” means a driver’s license suspension, disqualification, or prohibition order under the laws of this state or another state resulting from:
  - (A) a conviction of an offense prohibiting the operation of a motor vehicle while:
    - (i) intoxicated;
    - (ii) under the influence of alcohol; or
    - (iii) under the influence of a controlled substance;
  - (B) a refusal to submit to the taking of a breath or blood specimen following an arrest for an offense prohibiting the operation of a motor vehicle while:
    - (i) intoxicated;
    - (ii) under the influence of alcohol; or
    - (iii) under the influence of a controlled substance; or
  - (C) an analysis of a breath or blood specimen showing an alcohol concentration of a level specified by Section 49.01, Penal Code, following an arrest for an offense prohibiting the operation of a motor vehicle while intoxicated.
- (4) “Arrest” includes the taking into custody of a child, as defined by Section 51.02, Family Code.
- (5) “Conviction” includes an adjudication under Title 3, Family Code.
- (6) “Criminal charge” includes a charge that may result in a proceeding under Title 3, Family Code.
- (7) “Criminal prosecution” includes a proceeding under Title 3, Family Code.
- (8) “Department” means the Department of Public Safety.
- (9) “Director” means the public safety director of the department.



- (10) "Driver's license" has the meaning assigned by Section 521.001. The term includes a commercial driver's license or a commercial driver learner's permit issued under Chapter 522.
- (11) "Minor" means an individual under 21 years of age.
- (12) "Public place" has the meaning assigned by Section 1.07(a), Penal Code.

**§ 524.002. Rules; Application of Administrative Procedure Act**

- (a) The department and the State Office of Administrative Hearings shall adopt rules to administer this chapter.
- (b) Chapter 2001, Government Code, applies to a proceeding under this chapter to the extent consistent with this chapter.
- (c) The State Office of Administrative Hearings may adopt a rule that conflicts with Chapter 2001, Government Code, if a conflict is necessary to expedite the hearings process within the time required by this chapter and applicable federal funding guidelines.

**§ 524.011. Officer's Duties for Driver's License Suspension**

- (a) An officer arresting a person shall comply with Subsection (b) if:
  - (1) the person is arrested for an offense under Section 49.04, Penal Code, or an offense under Section 49.07 or 49.08 of that code involving the operation of a motor vehicle, submits to the taking of a specimen of breath or blood and an analysis of the specimen shows the person had an alcohol concentration of a level specified by Section 49.01(2)(B), Penal Code; or
  - (2) the person is a minor arrested for an offense under Section 106.041, Alcoholic Beverage Code, or Section 49.04, Penal Code, or an offense under Section 49.07 or 49.08, Penal Code, involving the operation of a motor vehicle and:
    - (A) the minor is not requested to submit to the taking of a specimen; or
    - (B) the minor submits to the taking of a specimen and an analysis of the specimen shows that the minor had an alcohol concentration of greater than .00 but less than the level specified by Section 49.01(2)(B), Penal Code.
- (b) A peace officer shall:
  - (1) serve or, if a specimen is taken and the analysis of the specimen is not returned to the arresting officer before the person is admitted to bail, released from custody, delivered as provided by Title 3, Family Code,

or committed to jail, attempt to serve notice of driver's license suspension by delivering the notice to the arrested person;

- (2) take possession of any driver's license issued by this state and held by the person arrested;
  - (3) issue a temporary driving permit to the person unless department records show or the officer otherwise determines that the person does not hold a driver's license to operate a motor vehicle in this state; and
  - (4) send to the department not later than the fifth business day after the date of the arrest:
    - (A) a copy of the driver's license suspension notice;
    - (B) any driver's license taken by the officer under this subsection;
    - (C) a copy of any temporary driving permit issued under this subsection; and
    - (D) a sworn report of information relevant to the arrest.
- (c) The report required under Subsection (b)(2)(B) must:
- (1) identify the arrested person;
  - (2) state the arresting officer's grounds for believing the person committed the offense;
  - (3) give the analysis of the specimen if any; and
  - (4) include a copy of the criminal complaint filed in the case, if any.
- (d) A peace officer shall make the report on a form approved by the department and in the manner specified by the department.
- (e) The department shall develop forms for the notice of driver's license suspension and temporary driving permits to be used by all state and local law enforcement agencies.
- (f) A temporary driving permit issued under this section expires on the 41<sup>st</sup> day after the date of issuance. If the person was driving a commercial motor vehicle, as defined by Section 522.003, a temporary driving permit that authorizes the person to drive a commercial motor vehicle is not effective until 24 hours after the time of arrest.

### **§ 524.035. Hearing**

- (a) The issues that must be proved at a hearing by a preponderance of the evidence are:
  - (1) whether:

- (A) the person had an alcohol concentration of a level specified by Section 49.01(2)(B), Penal Code, while operating a motor vehicle in a public place; or
  - (B) the person is a minor and had any detectable amount of alcohol in the minor's system while operating a motor vehicle in a public place; and
- (2) whether reasonable suspicion to stop or probable cause to arrest the person existed.
- (b) If the administrative law judge finds in the affirmative on each issue in Subsection (a), the suspension is sustained.
- (c) If the administrative law judge does not find in the affirmative on each issue in Subsection (a), the department shall:
  - (1) return the person's driver's license to the person, if the license was taken by a peace officer under Section 524.011(b);
  - (2) reinstate the person's driver's license; and
  - (3) rescind an order prohibiting the issuance of a driver's license to the person.
- (d) An administrative law judge may not find in the affirmative on the issue in Subsection (a)(1) if:
  - (1) the person is an adult and the analysis of the person's breath or blood determined that the person had an alcohol concentration of a level below that specified by Section 49.01, Penal Code, at the time the specimen was taken; or
  - (2) the person is a minor and the administrative law judge does not find that the minor had any detectable amount of alcohol in the minor's system when the minor was arrested.
- (e) The decision of the administrative law judge is final when issued and signed.

**§ 524.038. Instrument Reliability and Analysis Validity**

- (a) The reliability of an instrument used to take or analyze a specimen of a person's breath to determine alcohol concentration and the validity of the results of the analysis may be attested to in a proceeding under this subchapter by affidavit from the certified breath test technical supervisor responsible for maintaining and directing the operation of breath test instruments in compliance with department rule.
- (b) An affidavit submitted under Subsection (a) must contain statements on:
  - (1) the reliability of the instrument and the analytical results; and

- (2) compliance with state law in the administration of the program.
- (c) An affidavit of an expert witness contesting the reliability of the instrument or the results is admissible.
- (d) An affidavit from a person whose presence is timely requested under this section is inadmissible if the person fails to appear at a hearing without a showing of good cause. Otherwise, an affidavit under this section may be submitted in lieu of an appearance at the hearing by the breath test operator, breath test technical supervisor, or expert witness.

#### **§ 524.039. Appearance of Technicians at Hearing**

- (a) Notwithstanding Section 524.038, if not later than the fifth day before the date of a scheduled hearing the department receives from the person who requested a hearing written notice, including a facsimile transmission, requesting the presence at the hearing of the breath test operator who took the specimen of the person's breath to determine alcohol concentration or the certified breath test technical supervisor responsible for maintaining and directing the operation of the breath test instrument used to analyze the specimen of the person's breath, or both, each requested person must appear at the hearing.
- (b) The department may reschedule a hearing once not less than 48 hours before the hearing if the person requested to attend under Subsection (a) is unavailable. The department may also reschedule the hearing on showing good cause that the person requested under Subsection (a) is not available at the time of the hearing.

### **CHAPTER 724 (selected sections)**

#### **§ 724.001. Definitions**

In this chapter:

- (1) "Alcohol concentration" has the meaning assigned by Section 49.01, Penal Code.
- (2) "Arrest" includes the taking into custody of a child, as defined by Section 51.02, Family Code.
- (3) "Controlled substance" has the meaning assigned by Section 481.002, Health and Safety Code.
- (4) "Criminal charge" includes a charge that may result in a proceeding under Title 3, Family Code.
- (5) "Criminal proceeding" includes a proceeding under Title 3, Family Code.
- (6) "Dangerous drug" has the meaning assigned by Section 483.001, Health and Safety Code.

- (7) “Department” means the Department of Public Safety.
- (8) “Drug” has the meaning assigned by Section 481.002, Health and Safety Code.
- (9) “Intoxicated” has the meaning assigned by Section 49.01, Penal Code.
- (10) “License” has the meaning assigned by Section 521.001.
- (11) “Operate” means to drive or be in actual control of a motor vehicle or watercraft.
- (12) “Public place” has the meaning assigned by Section 1.07, Penal Code.

#### **§ 724.002. Applicability**

The provisions of this chapter that apply to suspension of a license for refusal to submit to the taking of a specimen (Sections 724.013, 724.015, and 724.048 and Subchapters C and D) apply only to a person arrested for an offense involving the operation of a motor vehicle or watercraft powered with an engine having a manufacturer’s rating of 50 horsepower or above.

#### **§ 724.003. Rulemaking**

The department and the State Office of Administrative Hearings shall adopt rules to administer this chapter.

#### **§ 724.011. Consent to Taking of Specimen**

- (a) If a person is arrested for an offense arising out of acts alleged to have been committed while the person was operating a motor vehicle in a public place, or a watercraft, while intoxicated, or an offense under Section 106.041, Alcoholic Beverage Code, the person is deemed to have consented, subject to this chapter, to submit to the taking of one or more specimens of the person’s breath or blood for analysis to determine the alcohol concentration or the presence in the person’s body of a controlled substance, drug, dangerous drug, or other substance.
- (b) A person arrested for an offense described by Subsection (a) may consent to submit to the taking of any other type of specimen to determine the person’s alcohol concentration.

#### **§ 724.012. Taking of Specimen**

- (a) One or more specimens of a person’s breath or blood may be taken if the person is arrested and at the request of a peace officer having reasonable grounds to believe the person:
  - (1) while intoxicated was operating a motor vehicle in a public place, or a watercraft; or
  - (2) was in violation of Section 106.041, Alcoholic Beverage Code.

- (b) A peace officer shall require the taking of a specimen of the person's breath or blood if:
  - (1) the officer arrests the person for an offense under Chapter 49, Penal Code, involving the operation of a motor vehicle or a watercraft;
  - (2) the person was the operator of a motor vehicle or a watercraft involved in an accident that the officer reasonably believes occurred as a result of the offense;
  - (3) at the time of the arrest the officer reasonably believes as a direct result of the accident:
    - (A) any individual has died or will die; or
    - (B) an individual other than the person has suffered serious bodily injury; and
  - (4) the person refuses the officer's request to submit to the taking of a specimen voluntarily.
- (c) The peace officer shall designate the type of specimen to be taken.
- (d) In this section, "serious bodily injury" has the meaning assigned by Section 1.07, Penal Code.

**§ 724.013. Prohibition on Taking Specimen if Person Refuses; Exception**

Except as provided by Section 724.012(b), a specimen may not be taken if a person refuses to submit to the taking of a specimen designated by a peace officer.

**§ 724.014. Person Incapable of Refusal**

- (a) A person who is dead, unconscious, or otherwise incapable of refusal is considered not to have withdrawn the consent provided by Section 724.011.
- (b) If the person is dead, a specimen may be taken by:
  - (1) the county medical examiner or the examiner's designated agent; or
  - (2) a licensed mortician or a person authorized under Section 724.016 or 724.017 if there is not a county medical examiner for the county.
- (c) If the person is alive but is incapable of refusal, a specimen may be taken by a person authorized under Section 724.016 or 724.017.

**§ 724.015. Information Provided by Officer Before Requesting Specimen**

Before requesting a person to submit to the taking of a specimen, the officer shall inform the person orally and in writing that:

- (1) if the person refuses to submit to the taking of the specimen, that refusal may be admissible in a subsequent prosecution;
- (2) if the person refuses to submit to the taking of the specimen, the person's license to operate a motor vehicle will be automatically suspended, whether or not the person is subsequently prosecuted as a result of the arrest, for not less than 180 days;

- (3) if the person is 21 years of age or older and submits to the taking of a specimen designated by the officer and an analysis of the specimen shows the person had an alcohol concentration of a level specified by Chapter 49, Penal Code, the person's license to operate a motor vehicle will be automatically suspended for not less than 90 days, whether or not the person is subsequently prosecuted as a result of the arrest;
- (4) if the person is younger than 21 years of age and has any detectable amount of alcohol in the person's system, the person's license to operate a motor vehicle will be automatically suspended for not less than 60 days even if the person submits to the taking of the specimen, but that if the person submits to the taking of the specimen and an analysis of the specimen shows that the person had an alcohol concentration less than the level specified by Chapter 49, Penal Code, the person may be subject to criminal penalties less severe than those provided under that chapter;
- (5) if the officer determines that the person is a resident without a license to operate a motor vehicle in this state, the department will deny to the person the issuance of a license, whether or not the person is subsequently prosecuted as a result of the arrest, under the same conditions and for the same periods that would have applied to a revocation of the person's driver's license if the person had held a driver's license issued by this state; and
- (6) the person has a right to a hearing on the suspension or denial if, not later than the 15<sup>th</sup> day after the date on which the person receives the notice of suspension or denial or on which the person is considered to have received the notice by mail as provided by law, the department receives, at its headquarters in Austin, a written demand, including a facsimile transmission, or a request in another form prescribed by the department for the hearing.

#### **§ 724.016. Breath Specimen**

- (a) A breath specimen taken at the request or order of a peace officer must be taken and analyzed under rules of the department by an individual possessing a certificate issued by the department certifying that the individual is qualified to perform the analysis.
- (b) The department may:
  - (1) adopt rules approving satisfactory analytical methods; and
  - (2) ascertain the qualifications of an individual to perform the analysis.
- (c) The department may revoke a certificate for cause.

#### **§ 724.017. Blood Specimen**

- (a) Only a physician, qualified technician, chemist, registered professional nurse, or licensed vocational nurse may take a blood specimen at the

request or order of a peace officer under this chapter. The blood specimen must be taken in a sanitary place.

- (b) The person who takes the blood specimen under this chapter, or the hospital where the blood specimen is taken, is not liable for damages arising from the request or order of the peace officer to take the blood specimen as provided by this chapter if the blood specimen was taken according to recognized medical procedures. This subsection does not relieve a person from liability for negligence in the taking of a blood specimen.
- (c) In this section, “qualified technician” does not include emergency medical services personnel.

#### **§ 724.018. Furnishing Information Concerning Test Results**

On the request of a person who has given a specimen at the request of a peace officer, full information concerning the analysis of the specimen shall be made available to the person or the person’s attorney.

#### **§ 724.019. Additional Analysis by Request**

- (a) A person who submits to the taking of a specimen of breath, blood, urine, or another bodily substance at the request or order of a peace officer may, on request and within a reasonable time not to exceed two hours after the arrest, have a physician, qualified technician, chemist, or registered professional nurse selected by the person take for analysis an additional specimen of the person’s blood.
- (b) The person shall be allowed a reasonable opportunity to contact a person specified by Subsection (a).
- (c) A peace officer or law enforcement agency is not required to transport for testing a person who requests that a blood specimen be taken under this section.
- (d) The failure or inability to obtain an additional specimen or analysis under this section does not preclude the admission of evidence relating to the analysis of the specimen taken at the request or order of the peace officer.
- (e) A peace officer, another person acting for or on behalf of the state, or a law enforcement agency is not liable for damages arising from a person’s request to have a blood specimen taken.

#### **§ 724.031. Statement Requested on Refusal**

If a person refuses the request of a peace officer to submit to the taking of a specimen, the peace officer shall request the person to sign a statement that:

- (1) the officer requested that the person submit to the taking of a specimen;



- (2) the person was informed of the consequences of not submitting to the taking of a specimen; and
- (3) the person refused to submit to the taking of a specimen.

**§ 724.032. Officer's Duties for License Suspension; Written Refusal Report**

- (a) If a person refuses to submit to the taking of a specimen, whether expressly or because of an intentional failure of the person to give the specimen, the peace officer shall:
  - (1) serve notice of license suspension or denial on the person;
  - (2) take possession of any license issued by this state and held by the person arrested;
  - (3) issue a temporary driving permit to the person unless department records show or the officer otherwise determines that the person does not hold a license to operate a motor vehicle in this state; and
  - (4) make a written report of the refusal to the director of the department.
- (b) The director must approve the form of the refusal report. The report must:
  - (1) show the grounds for the officer's belief that the person had been operating a motor vehicle or watercraft powered with an engine having a manufacturer's rating of 50 horsepower or above while intoxicated; and
  - (2) contain a copy of:
    - (A) the refusal statement requested under Section 724.031; or
    - (B) a statement signed by the officer that the person refused to:
      - (i) submit to the taking of the requested specimen; and
      - (ii) sign the requested statement under Section 724.031.
- (c) The officer shall forward to the department not later than the fifth business day after the date of the arrest:
  - (1) a copy of the notice of suspension or denial;
  - (2) any license taken by the officer under Subsection (a);
  - (3) a copy of any temporary driving permit issued under Subsection (a); and
  - (4) a copy of the refusal report.

- (d) The department shall develop forms for notices of suspension or denial and temporary driving permits to be used by all state and local law enforcement agencies.
- (e) A temporary driving permit issued under this section expires on the 41<sup>st</sup> day after the date of issuance. If the person was driving a commercial motor vehicle, as defined by Section 522.003, a temporary driving permit that authorizes the person to drive a commercial motor vehicle is not effective until 24 hours after the time of arrest.

#### **§ 724.042. Issues at Hearing**

The issues at a hearing under this subchapter are whether:

- (1) reasonable suspicion or probable cause existed to stop or arrest the person;
- (2) probable cause existed to believe that the person was:
  - (A) operating a motor vehicle in a public place while intoxicated; or
  - (B) operating a watercraft powered with an engine having a manufacturer's rating of 50 horsepower or above while intoxicated.
- (3) the person was placed under arrest by the officer and was requested to submit to the taking of a specimen; and
- (4) the person refused to submit to the taking of a specimen on request of the officer.

#### **§ 724.048. Relationship of Administrative Proceeding to Criminal Proceeding**

- (a) The determination of the department or administrative law judge:
  - (1) is a civil matter;
  - (2) is independent of and is not an estoppel as to any matter in issue in an adjudication of a criminal charge arising from the occurrence that is the basis for the suspension or denial; and
  - (3) does not preclude litigation of the same or similar facts in a criminal prosecution.
- (b) Except as provided by Subsection (c), the disposition of a criminal charge does not affect a license suspension or denial under this chapter and is not an estoppel as to any matter in issue in a suspension or denial proceeding under this chapter.
- (c) If a criminal charge arising from the same arrest as a suspension under this chapter results in an acquittal, the suspension under this chapter may not be imposed. If a suspension under this chapter has already been imposed, the department shall rescind the suspension and remove references to the suspension from the computerized driving record of the individual.

### **§ 724.061. Admissibility of Refusal of Person to Submit to Taking of Specimen**

A person's refusal of a request by an officer to submit to the taking of a specimen of breath or blood, whether the refusal was express or the result of an intentional failure to give the specimen, may be introduced into evidence at the person's trial.

### **§ 724.062. Admissibility of Refusal of Request for Additional Test**

The fact that a person's request to have an additional analysis under Section 724.019 is refused by the officer or another person acting for or on behalf of the state, that the person was not provided a reasonable opportunity to contact a person specified by Section 724.019(a) to take the specimen, or that reasonable access was not allowed to the arrested person may be introduced into evidence at the person's trial.

### **§ 724.063. Admissibility of Alcohol Concentration or Presence of Substance**

Evidence of alcohol concentration or the presence of a controlled substance, drug, dangerous drug, or other substance obtained by an analysis authorized by Section 724.014 is admissible in a civil or criminal action.

### **§ 724.064. Admissibility in Criminal Proceeding of Specimen Analysis**

On the trial of a criminal proceeding arising out of an offense under Chapter 49, Penal Code, involving the operation of a motor vehicle or a watercraft, or an offense under Section 106.041, Alcoholic Beverage Code, evidence of the alcohol concentration or presence of a controlled substance, drug, dangerous drug, or other substance as shown by analysis of a specimen of the person's blood, breath, or urine or any other bodily substance taken at the request or order of a peace officer is admissible.

## **TEXAS ALCOHOLIC BEVERAGE CODE**

### **§ 106.01. Definition**

In this code, "minor" means a person under 21 years of age.

### **§ 106.041. Driving Under the Influence of Alcohol by Minor**

- (a) A minor commits an offense if the minor operates a motor vehicle in a public place while having any detectable amount of alcohol in the minor's system.
- (b) Except as provided by Subsection (c), an offense under this section is a Class C misdemeanor.
- (c) If it is shown at the trial of the defendant that the defendant is a minor who is not a child and who has been previously convicted at least twice of an offense under this section, the offense is punishable by:
  - (1) a fine of not less than \$500 or more than \$2,000;

- (2) confinement in jail for a term not to exceed 180 days; or
  - (3) both the fine and confinement.
- (d) In addition to any fine and any order issued under Section 106.115, the court shall order a minor convicted of an offense under this section to perform community service for:
  - (1) not less than 20 or more than 40 hours, if the minor has not been previously convicted of an offense under this section; or
  - (2) not less than 40 or more than 60 hours, if the minor has been previously convicted of an offense under this section.
- (e) Community service ordered under this section must be related to education about or prevention of misuse of alcohol.
- (f) A minor who commits an offense under this section and who has been previously convicted twice or more of offenses under this section is not eligible for deferred disposition.
- (g) An offense under this section is not a lesser included offense under Section 49.04, Penal Code.
- (h) For the purpose of determining whether a minor has been previously convicted of an offense under this section:
  - (1) an adjudication under Title 3, Family Code, that the minor engaged in conduct described by this section is considered a conviction under this section; and
  - (2) an order of deferred disposition for an offense alleged under this section is considered a conviction of an offense under this section.
- (i) A peace officer who is charging a minor with committing an offense under this section is not required to take the minor into custody but may issue a citation to the minor that contains written notice of the time and place the minor must appear before a magistrate, the name and address of the minor charged, and the offense charged.
- (j) In this section:
  - (1) "Child" has the meaning assigned by Section 51.02, Family Code.
  - (2) "Motor vehicle" has the meaning assigned by Section 32.34(a), Penal Code.
  - (3) "Public place" has the meaning assigned by Section 1.07, Penal Code.

## **FAMILY CODE**

### **§ 52.01. Taking into Custody; Issuance of Warning Notice**

- (a) A child may be taken into custody:
  - (1) pursuant to an order of the juvenile court under the provisions of this subtitle;
  - (2) pursuant to the laws of arrest;
  - (3) by a law-enforcement officer, including a school district peace officer commissioned under Section 37.081, Education Code, if there is probable cause to believe that the child has engaged in:
    - (A) conduct that violates a penal law of this state or a penal ordinance of any political subdivision of this state; or
    - (B) delinquent conduct or conduct indicating a need for supervision;
  - (4) by a probation officer if there is probable cause to believe that the child has violated a condition of probation imposed by the juvenile court; or
  - (5) pursuant to a directive to apprehend issued as provided by Section 52.015.
- (b) The taking of a child into custody is not an arrest except for the purpose of determining the validity of taking him into custody or the validity of a search under the laws and constitution of this state or of the United States.
- (c) A law-enforcement officer authorized to take a child into custody under Subdivisions (2) and (3) of Subsection (a) of this section may issue a warning notice to the child in lieu of taking the child into custody if:
  - (1) guidelines for warning disposition have been issued by the law-enforcement agency in which the officer works;
  - (2) the guidelines have been approved by the juvenile court of the county in which the disposition is made;
  - (3) the disposition is authorized by the guidelines;
  - (4) the warning notice identifies the child and describes the child's alleged conduct;
  - (5) a copy of the warning notice is sent to the child's parent, guardian, or custodian as soon as practicable after disposition; and
  - (6) a copy of the warning notice is filed with the law-enforcement agency and the office or official designated by the juvenile board.
- (d) A warning notice filed with the office or official designated by the juvenile board may be used as the basis of further action if necessary.

## **§ 52.02. Release or Delivery to Court**

- (a) Except as provided by Subsection (c), a person taking a child into custody, without unnecessary delay and without first taking the child to any place other than a juvenile processing office designated under Section 52.025, shall do one of the following:
  - (1) release the child to a parent, guardian, custodian of the child, or other responsible adult upon that person's promise to bring the child before the juvenile court as requested by the court;
  - (2) bring the child before the office or official designated by the juvenile board if there is probable cause to believe that the child engaged in delinquent conduct or conduct indicating a need for supervision;
  - (3) bring the child to a detention facility designated by the juvenile board;
  - (4) bring the child to a secure detention facility as provided by Section 51.12(j);
  - (5) bring the child to a medical facility if the child is believed to suffer from a serious physical condition or illness that requires prompt treatment; or
  - (6) dispose of the case under Section 52.03.
- (b) A person taking a child into custody shall promptly give notice of the person's action and a statement of the reason for taking the child into custody, to:
  - (1) the child's parent, guardian, or custodian; and
  - (2) the office or official designated by the juvenile board.
- (c) A person who takes a child into custody and who has reasonable grounds to believe that the child has been operating a motor vehicle in a public place while having any detectable amount of alcohol in the child's system may, before complying with Subsection (a):
  - (1) take the child to a place to obtain a specimen of the child's breath or blood as provided by Chapter 724, Transportation Code; and
  - (2) perform intoxilyzer processing and videotaping of the child in an adult processing office of a law enforcement agency.
- (d) Notwithstanding Section 51.09(a), a child taken into custody as provided by Subsection (c) may submit to the taking of a breath specimen or refuse to submit to the taking of a breath specimen without the concurrence of an attorney, but only if the request made of the child to give the specimen and the child's response to that request is videotaped. A videotape made under this subsection must be maintained until the disposition of any proceeding against the child relating to the arrest is final and be made available to an attorney representing the child during that period.

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